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Contract closeout pathologies and recovery strategies

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THESIS

CONTRACT CLOSEOUT PATHOLOGIES AND RECOVERY STRATEGIES

by

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June 2003

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The primary purpose of this thesis is to classify contract closeout pathologies, identify the root causes of these pathologies, and provide a series of strategies to regain control of the contract closeout process all within the context of the Organizational Systems Framework Model. Critical pathologies identified include process friction, inadequate information technology, contract complexity, personnel skill level, contract financial issues, management concern, perceptions, timeliness, problematic steps, existing backlogs, inadequate manpower, and poor quality records/documentation. Recommendations included taking the appropriate steps to make contract closeout a command priority throughout the Department of the Navy, developing specialized contract closeout training, taking an immediate look at the four most problematic steps of the contract closeout process and implement immediate measures to alleviate the problems that have historically plagued them, and centralizing the contract closeout function in as many commands as practical.

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CONTRACT CLOSEOUT PATHOLOGIES AND RECOVERY STRATEGIES

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ABSTRACT

The primary purpose of this thesis is to classify contract closeout pathologies, identify the root causes of these pathologies, and provide a series of strategies to regain control of the contract closeout process all within the context of the Organizational Systems Framework Model. Critical pathologies identified include process friction, inadequate information technology, contract complexity, personnel skill level, contract financial issues, management concern, perceptions, timeliness, problematic steps, existing backlogs, inadequate manpower, and poor quality records/documentation. Recommendations included taking the appropriate steps to make contract closeout a command priority throughout the Department of the Navy, developing specialized contract closeout training, taking an immediate look at the four most problematic steps of the contract closeout process and implement immediate measures to alleviate the problems that have historically plagued them, and centralizing the contract closeout function in as many commands as practical.

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I. INTRODUCTION

A. PURPOSE

The basic purpose of this thesis is to identify solutions or strategies that can be utilized by the host Command to make the contract closeout function more efficient and effective. The host Command has challenges to face with the contract closeout process. Two recent independent reviews have documented a process that is ineffective in resolving a large backlog of overage contracts.

B. SCOPE AND ORGANIZATION

The general thrust of this thesis is to identify the many pitfalls to avoid in the contract closeout process and to provide the contract closeout manager with a series of tools or strategies that can be used to recover from a pathological situation. Pathologies of overaged contracts, which can include canceled funds, missed timelines, and over/under payments were investigated. Causes of the backlogs and organizational stumbling blocks were identified and analyzed using the Organizational Systems Framework Model (OSFM). The thesis will focus on the prevailing environment at the host Command while including applicable analysis from entities across the Navy and the Federal Government.

This thesis is arranged in six chapters. In this chapter, general information is defined, including stating the purpose of this research, the scope and organization of the thesis, the primary research question and secondary research questions, and describing the methodology for data collection and analysis.

Chapter II briefly outlines the basic processes, procedures and major guidance pertaining to the contract closeout process.

Chapter III examines the contract closeout process within the context of the Organizational Systems Framework Model (OSFM).

Chapter IV presents the data collected via the Contract Closeout Survey, which is included as Appendix 1 to this thesis.

Chapter V consists of an analysis of the data presented in the previous chapter.

Chapter VI presents the conclusions and recommendations based on the research conducted as well as possible areas for future or follow-on research.

C. RESEARCH QUESTIONS

1. Primary Research Question

What are the critical pathologies associated with the contract closeout process and what strategies might be employed to effectively attack these pathologies?

2. Secondary Research Questions

a. What are the critical pathologies that affect the contract closeout process?

b. What are the causes and contributing factors of each contract closeout pathology?

c. What are the common perceptions concerning contract closeout?

d. What strategies might be utilized to overcome or correct the critical pathologies in the contract closeout process?

e. What actions might be taken to enhance the contract closeout process?

D. METHODOLOGY

The researcher used a variety of methods to gather data. First, a comprehensive review of the literature was conducted that included Department of the Navy, Department of Defense, Federal Government, and commercial sources. These data were used to provide the background on the contract closeout process as well as to identify problem areas and successful recovery strategies. Policies, best practices, Naval Audit Service (NAS) Audits, General Accounting Office (GAO) Reports, professional journal articles, and previous theses were reviewed and cited as applicable. Electronic searches via the internet were a primary method of searching the literature.

The researcher is in a unique position in the host Command that allows access to closeout data, personnel, and actual policy and procedures. The researcher is the second-line supervisor for the centralized Contract Closeout Branch. Before the Contract Closeout Branch Head position was filled, the researcher also performed those duties. This gave the researcher insights into the host Command-specific problems and issues. These data, along with informal interviews of closeout personnel and personal observation will allow the researcher to provide a detailed description of the current contract closeout environment at the host Command.

From information gained via these two methodologies, a survey was crafted to gain additional and timely insights into the contract closeout process by polling stakeholders throughout the process on their perceptions and ideas within the overarching context of the Organizational Systems Framework Model. This tool was designed to identify among other things, the contracting experience level, closeout experience level, problems seen, potential proposed solutions, and general comments that can be used to frame the closeout process with the Organizational Systems Framework Model.

These data were analyzed via simple statistical analyses in order to answer the research questions and provide potential solutions and courses of action that will benefit not only the host Command, but all DON contract closeout activities as well.

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II. CONTRACT CLOSEOUT BACKGROUND

A. CONTRACT CLOSEOUT BACKGROUND

Contract closeout is the process by which contracts are verified complete and administratively processed for official closure. Generally, closeout is completed when all administrative actions have been completed, all disputes settled, and final payment has been made. [15:p. 2] One of the overarching documents that govern the contract closeout process is the Federal Acquisition Regulation. Contracts considered candidates for closeout are those that are physically complete. Per FAR 4.804-4, a contract is physically complete when:

- There are no litigation, ongoing fraud investigations, or termination actions;
- The contractor has completed the required deliveries;
- The Government has inspected and accepted the supplies; and
- All option provisions, if any, have expired.

The FAR also goes on to prescribe timelines to close contracts based on contract type. These timelines are as follows:

Contract Type	Calendar Months After The Month in Which Physically Completed
Contracts Using Simplified Acquisition Procedures	Evidence of Receipt and Final Payment
All Other Firm Fixed-Price Contracts	6 Months
Cost-Reimbursement Contracts including Time and Material (T&M) and Labor Hour (LH) contracts.	36 Months
All Other Contract Types	20 Months

Figure 1. Contract Closeout Timeframes
[Source: From[21: 4.804-1(a)]]

There are many steps to the contract closeout process. The 15 major steps to contract closeout are outlined in the FAR, [21: 4.804-5(a)]. Many can be considered concurrent vice sequential steps. [2:p. 50] These steps include:

(1) Disposition of classified material is completed;
(2) Final patent report is cleared;
(3) Final royalty report is cleared;
(4) There is no outstanding value engineering change proposal;
(5) Plant clearance report is received;
(6) Property clearance is received;
(7) All interim or disallowed costs are settled;
(8) Price revision is completed;
(9) Subcontracts are settled by the prime contractor;
(10) Prior year indirect cost rates are settled;
(11) Termination docket is completed;
(12) Contract audit is completed;
(13) Contractor's closing statement is completed;
(14) Contractor's final invoice has been submitted; and
(15) Contract funds review is completed and deobligation of any excess funds is recommended.

FAR 42.708 outlines specialized procedures that may be used in certain situations to effect a "quick-closeout" of a contract. These procedures were implemented in 1995 by then Director of Defense Procurement, Eleanor Spector. These procedures may be used if the contract is physically complete, and the amount of unsettled indirect cost to be allocated to the contract is relatively insignificant. "Indirect cost amounts will be considered insignificant when the total unsettled indirect cost to be allocated to any one contract does not exceed $1,000,000; and the cumulative unsettled indirect costs to be allocated to one or more contracts in a single fiscal year do not exceed 15 percent of the estimated, total unsettled indirect costs allocable to cost-type contracts for that fiscal year."

Figure 2 outlines the basic closeout process and although the figure depicts a sequential process, many of the steps can be completed concurrently.

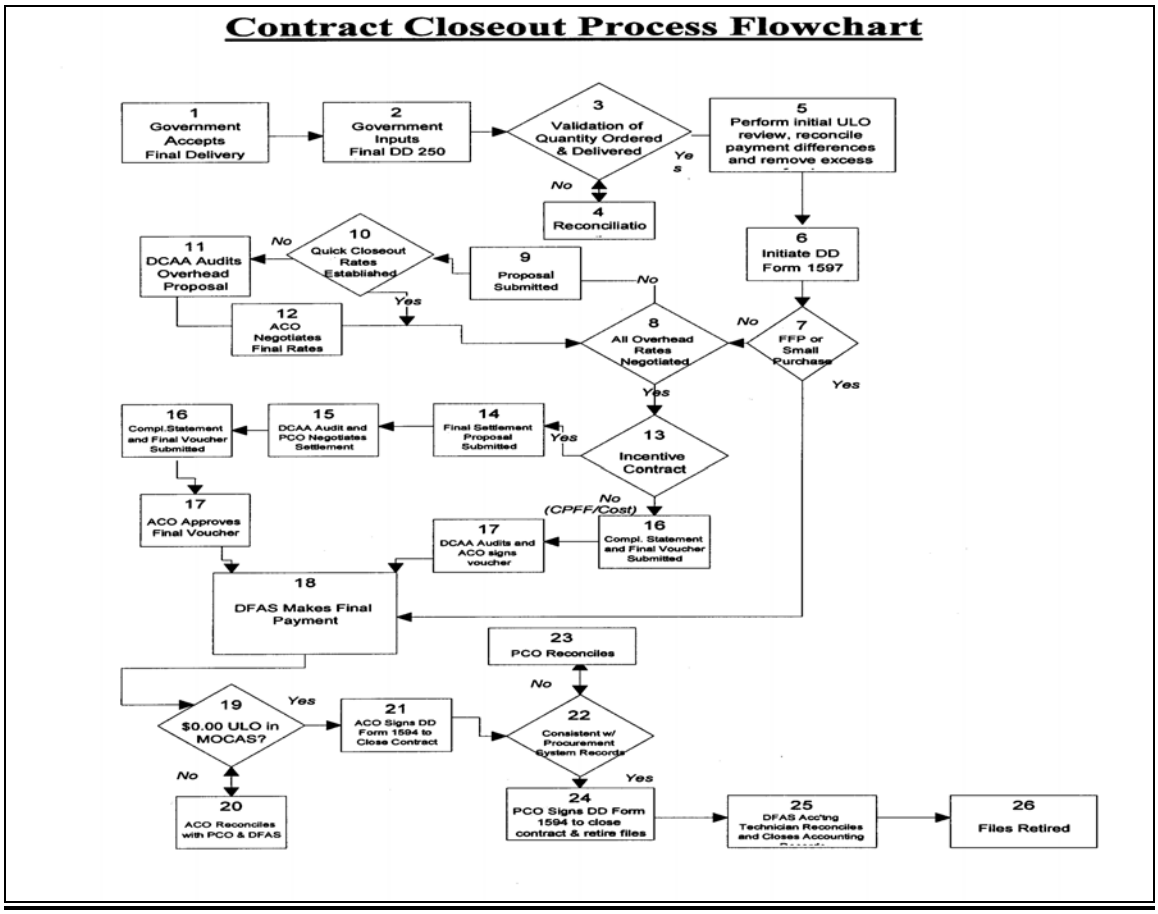

Figure 2. Contract Closeout Process Flowchart
[Source: From[5:p. 31]]

Per Defense Contract Management Agency (DCMA), the Administrative Contracting Officer (ACO) at the Contract Management Office (CMO) leads the contract closeout process and ensures coordination amongst the stakeholders to close the contract. [15:p. 5] The stakeholders in the closeout process who participate in these steps include the buying activity, the administrating activity, DCMA, Defense Contract Audit Agency, Defense Finance and Accounting Service (DFAS), the contractor, and program/customer personnel. These personnel include auditors, contract administrators, ACOs, contract specialists, Procuring Contracting Officers (PCOs), and personnel from finance, disbursing, logistics, security, and legal departments or directorates.

Timely contract closeout deobligates excess funds for possible use elsewhere, identifies the need for additional funds in a timely fashion, and minimizes administrative costs for all parties. Timely closeout minimizes the need to replace cancelled funds with

current year funding and minimizes the interest costs associated with late payments of final vouchers. [59:p. 29]

Late closeouts of contracts are causing the Government to lose hundreds of millions of dollars of current year funds to replace canceled funds on improperly closed and unclosed contracts. [19:p. 8] General Accounting Office (GAO) and Department of Defense Inspector General (DODIG) reports find that closeout procedures are not being consistently followed. Excessive delays increase the Government exposure to contractor financial and internal control problems. [24] Navy metrics as of 20 August 2002 show a total of 63,031 contracts pending closeout. Another DODIG Report found that contracts are not closed out in accordance with FAR timelines, excess funds are not being deobligated, overpayments are not identified in a timely manner, closeout is hindered by inadequate Information Technology systems, there is large backlog of DCAA overhead rate audits, and Government property is not returned at contract completion. [57]

A more recent DODIG Report found that from Feb 2000 through March 2001 DCMA closed 30,000 overaged contracts, but during that same time period 27,000 contracts became overaged. DODIG estimates that at this rate it will take at least 6 years to clear the backlog. [52:p. 1] Weaknesses in the closeout process that were identified included inadequate monitoring of contracts, inattention to closeout requirements, erroneous data about contracts awaiting closure, lack of coordination, lack of sufficient funding, a shortage of personnel, and untimely contractor input.

In 1998, then Deputy Secretary of Defense John Hamre initiated a Department of Defense Reform Initiative Directive (DRID) # 32 on paperless contract closeout. This DRID was aimed at achieving savings in time and money by accelerating the closeout process. [27:p. 1] This DRID was eventually consolidated with other paperless initiatives in DRID #47, End-to-End Procurement Process.

The Business Initiative Council (BIC) was established in 2001 to promote changes in business practices to increase and encourage efficiency and to ensure proper resource allocation based on priorities. AM18 was a BIC approved initiative to "Streamline Contract Closeout Process." [8:p. 1] The process champion was OSD, AT&L. The DoD-wide Contract Closeout/Conversion Steering Group was established to study the problem.

B. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL (OSFM)

The OSFM is a means to provide an overarching context to review organizational structures and/or problems. In this thesis it is being used as a tool to study and analyze the contract closeout process and its associated pathologies.

The OSFM divides the process into inputs, throughput, and results. Inputs will include environmental factors, key success factors, and system direction. Throughput will include design factors such as tasks, technology, structure, people, and the actual process. Results include the culture of the workforce, outputs, and outcomes. The OSFM will provide a comprehensive approach to organizational management and understanding of the complex contract closeout problem.

Within the input section of the model, environment/context includes factors that may be political, economic, social, or technological in nature. These are forces that are external to the organization. Key success factors will highlight those factors that are essential to organizational or process success. System direction will include overarching organizational mandates, values, and mission. System direction also includes strategic issues, vision, goals, and specific organizational strategies.

Within the throughput section there are a variety of design factors. Tasks/jobs includes the basic tasks of the process and the degree of specialization, variety, or differentiation encountered. Technology describes the workflow, interdependencies, and physical facilities and equipment. Structure describes the grouping of activities, hierarchies, roles, and integration. People is concerned with the motives, expectations, mindsets, and skills of the personnel. Process/subsystems describe the financial management, human resource management, communications, and acquisition processes within the organization.

Within the results section, culture includes norms, values, behavior, and conflict management. Outputs is concerned with the goods or services produced. Outcomes includes the implications of the outputs for stakeholders and how they are measured.

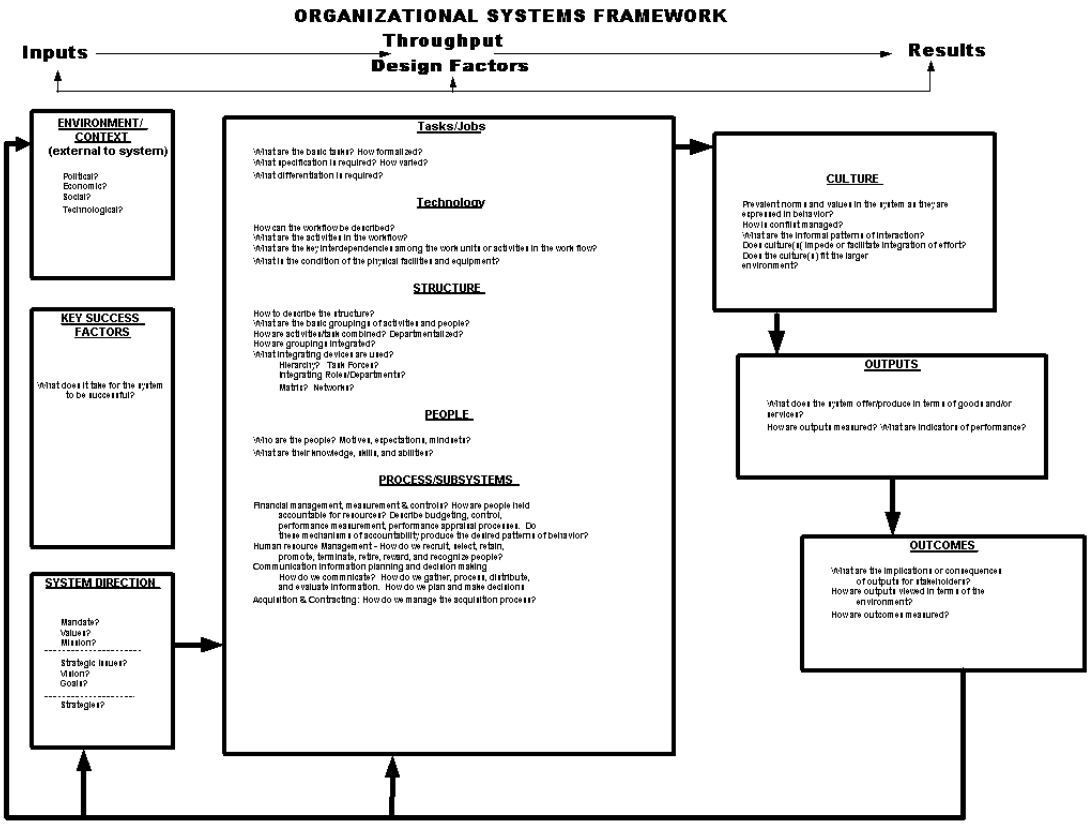

Figure 3. Organizational Systems Framework Model
[Source: After [47] Adapted by researcher]

C. HOST COMMAND

Contract closeout is a personal issue of concern based on the researcher's work environment within the host Command. This Command has a centralized Contracts Directorate Closeout Branch (Closeout Branch) that is responsible for the closeout and control of physically completed contracts awarded by the organization. The organization has dedicated fulltime resources to contract closeout to include:

- 1 GS-1102-13 Branch Head/PCO
- 4 GS-1102-12 Contract Specialists
- 1 GS-1102-07 Contract Specialist (6 month rotation)

Non-contracting full-time support consists of an accounting technician and a budget analyst. Additional support staff includes legal counsel, a security officer, two

library clerks, and a financial officer. None of this additional support staff is dedicated 100% to the closeout process.

During a recent audit of the host Command, it was found that contracts in the "Physically Complete But Not Closed" category went from a total of 4,027 contracts valued at about $19 billion (as of October 2001) to 4,203 contracts with an estimated value of above $22 billion (as of June 2002). The Closeout Branch closed 149 contracts in Fiscal year 2001 and 66 contracts in Fiscal year 2002 through April 2002. [37:p. 1]

The resulting closeout process appears to be ineffective as the branch appears unable to close enough contracts to at least maintain a steady state backlog. Figure 4 details the situation. One can plainly see that the contracts becoming eligible for closeout each year are constantly accumulating into the backlog.

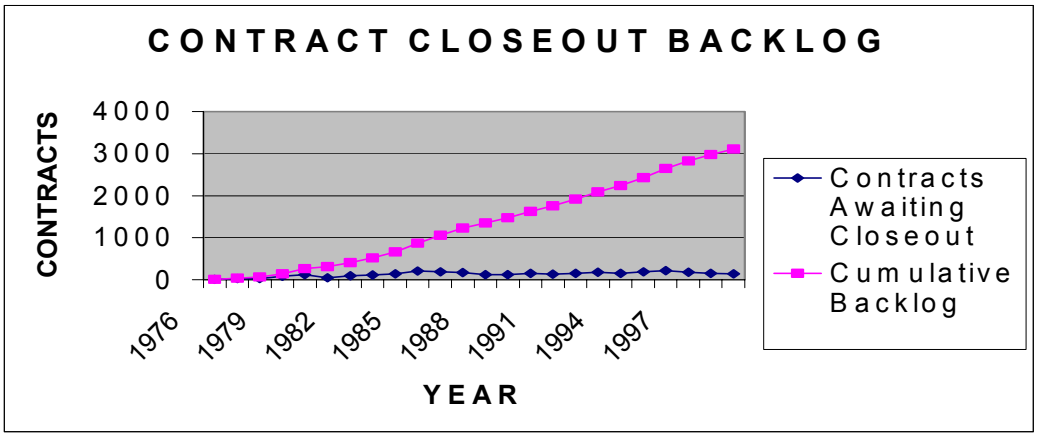

Figure 4. Contract Closeout Backlog
[Source: Developed by researcher]

D. HISTORICAL PATHOLOGIES

In this section historical pathologies identified in the literature search are briefly listed and explained.

1. Process Friction

Process friction is the added administrative burden associated with the number of handoffs during a process between individuals and organizations. As mentioned previously, the FAR names 15 major tasks that must be completed to ensure a proper contract closeout. In a previous thesis, an analysis found that those 15 tasks can be further broken down into 69 separate processes. [2:p. 51] This is also acerbated by the

use of paper-based processes which may limit the communication options available for these processes. This was supported by the findings of the Office of Federal Procurement Policy (OFPP) in their Best Practices Guide for Contract Administration. [56] They found that poor coordination between parties was a contributing factor to problems with the closeout process. The contract closeout process requires the integrated efforts of multiple organizations with varying missions and organizational structures. DCMA has general responsibility for managing the contract closeout process in strict compliance with the Federal Acquisition Regulation (FAR) but has no authority to prioritize the efforts of other contributing organizations. The contract closeout process is a small subset of the overall missions of the contributing organizations and consequently receives low priority with respect to organizational resource management. The contract closeout workflow is often seen as rigid and sequential. A number of different functional disciplines cooperating at each organization are required to successfully closeout a contract. Staffing within these functions has dissimilar motivations and priorities. The current process is plagued by fragmented process flows and increased cycle time. [2:p. 53]

2. Inadequate Information Technology

Inadequate Information Technology (IT) support, IT communication, and inadequate IT automation are another major grouping of pathologies that are cited in the literature. [2:p. 51] In essence there was poor use of Management Information Systems to monitor and streamline the contract closeout process. [56] Erroneous data about contracts awaiting closeout means that those responsible for the process may not have the information available to manage their work, make assignments, or properly prioritize their work. [57:p. ii]

3. Long-Life Contracts

Problems associated with long-life contracts (those with periods of performance greater than or equal to five years) included; changes in administration or paying offices; contractors who have been acquired, merged, or restructured; bankruptcies; discontinued operations; and contracts distributed due to Base Realignment And Closure (BRAC) activities.

4. Personnel Skill Level move to next page

The knowledge, skills, and abilities of responsible contract closeout participants between and within organizations differ. Provided training and career development opportunities often focus on high profile, dynamic projects rather than low priority, slower paced projects. Past audit findings have determined that contracting personnel were not properly trained in the contract closeout process. [57:p. ii]

5. Contract Financial Issues

Contract financial issues include unliquidated obligations, negative unliquidated obligations, and unnecessary interest costs. Excess funds are not identified and deobligated nor are overpayments identified and recovered in a timely manner. [39:p. i] Factors that contribute to these pathologies include subcontractor late submissions and untimeliness of final approval of overhead rates. Improper closeouts also increase the likelihood of claims against the Government. Additionally, the availability of resources to apply towards contract closeout has become more scarce with recent draw-downs of Government personnel throughout all of the stakeholders.

6. Management Concern

Management concern and support have been another major factor associated with process pathologies. [56: p. 2] This not only concerns upper level management but also the supervisory levels at the contract award and administration organizations. Inattention to closeout requirements is just a manifestation of the lack of management concern. [52] Inadequate monitoring of contracts may be a symptom of the general shortage of personnel to work on contract closeouts, but again it is an indicator of management concern as management can allocate or reallocate resources based on their priorities. In a recent speech, Michael Wynne, Principal Deputy Under Secretary of Defense addressed this issue and stated "Continued commitment at the corporate levels of the organization is important and necessary to enable DoD to progress rapidly to implement the Department's end-to-end business process improvement..." [61]

7. Perceptions

The popular misconception that contract closeout is the dregs of the acquisition cycle is another manifestation of this problem. [5:p. 3] "In a 1993 customer survey, the Defense Contract Management Command (DCMC) identified the contract closeout

process to be one of the most important services provided and one with which customers are least satisfied." [59: p. 3]

8. Timeliness

When discussing the pathologies of the current process we often focus on the Government and their processes but one of the key stakeholders is not included in this group. Untimely contractor input has been cited as a reason in many reports and audits for delays in closing contracts. Previously, audit reports from the Office of the Inspector General identified specific contract closeout findings that negatively impacted process effectiveness. These findings included failure to remove excess funds and failure to recover overpayments. [39:p. i] [41:p. i] Specifically ACOs were failing to conduct timely fund reviews in over 50% of the contracts reviewed. These two reports examined two DCMC regions having a combined backlog of over 19,000 contracts. Overage status of the contracts examined averaged 19 months overage based on FAR closeout time frames. In a previous study, respondents gave the following results when asked "What specific areas impede your ability to closeout a contract within the prescribed timeframes?" [59:p. 64]

Contractor caused delay	42%
DCAA	31%
Staffing	14%
DFAS	8%
Other	5%

9. Problem Process Steps

Some specific pathologies noted was the fact that property screening was one of the most time-consuming tasks for ACOs. [5:p. 22]

The backlog of DCAA audits [39:p. 3] and the failure to receive documentation of deliverables and unliquidated obligation balances for FFP type contracts [39:p. 7] were other pathologies cited. In his thesis, Valovcin identified four areas that were cited as being the most difficult tasks in the contract closeout process. These tasks included (#7) Settling all interim or disallowed costs, (#8) Completing all price revisions, (#10) Settling prior-year indirect cost rates, and (#12) Completing contract audits. [59:p. 60] Valovcin

surmised that this difficulty was due in large part by the involvement of three or more stakeholders in the particular tasks cited as overly difficult. [59:p. 61]

10. Existing Backlogs

DCMA cited a variety of causal factors to their overaged backlog. The top five cited factors included:

1.	Pending Negotiation of indirect rates	42%
2.	Pending contractor submittal of final invoice/voucher	30%
3.	Final Audit in process	10%
4.	Pending notice of final payment	6%
5.	Pending replacement funds	4%

A past audit of the National Aeronautics and Space Administration (NASA) contained some interesting findings. [24] In December of 1993 there were 2600 contracts awaiting contract closeout. Seventy percent of the 449 FFP contracts exceeded the FAR threshold for timely closeout. The auditors found that the contract closeout function was given low priority by NASA. Other contributing factors cited included DCAA audit backlogs, contractor tardiness in submitting required closeout related paperwork, and litigation.

In April 2001, there were 116,563 physically complete contracts still awaiting closure in the Mechanization of Contract Administration Services (MOCAS) system. These contracts had to be closed out since MOCAS was eventually going to be transitioned to a new payment system. [52]

In a report issued by the President's Council on Integrity and Efficiency, the auditors found that "contracting officials did not close contracts or grants within prescribed timeframes." Overaged contracts ranged from one month to 14 years overage. [57:p. i] Other problems noted were the failure to deobligate excess funds, failure to identify overpayments, inadequate information systems, DCAA audit backlog, failure to ensure goods and services were received, failure to disposition Government property, and failure to properly train personnel in the contract closeout process and hold them accountable.

11. Inadequate Manpower

In the MOCAS transition effort one of the OIG audit findings was that there was a lack of staffing resources to adequately close the backlog of contracts. [52]

12. Records and File Documentation

Contract records often start out in an organized fashion, but over time with the transfer of personnel or the generation of more paperwork and correspondence the files can become misplaced or extremely disorganized. [5:p. 5] Missing files and incomplete or inaccurate records impede the contract closeout process. [57:p. 5] The General Accounting Office (GAO) noted that the Environmental Protection Agency (EPA) did not consistently follow their own closeout policies and procedures. Some contracts were closed without the proper documentation. [23:p. 1]

E. HISTORICAL/POTENTIAL SOLUTIONS

A successful contract closeout system requires timeliness of each closeout event, expedited deobligation of excess funds for possible use elsewhere, identification of the need for additional funds as early as possible, expedited security clearance, and reduction of administrative costs for all the parties. Timely closeout minimizes the need to replace canceled funds with current year funding. [14:p. 6] Success also requires a low or non-existent backlog, compliance with FAR timelines, and establishment of an acknowledged value-added process evident to the pre-award team and customer. There are many potential solutions to minimizing or overcoming identified pathologies in the contract closeout process.

1. Process Friction

The formation of Integrated Process Teams (IPTs) should be encouraged to minimize process friction between individuals and organizations. [6] Strong IPT and team composition is important and such teams should contain representatives from all of the stakeholders. In some instances the establishment of a "Tiger Team" or Working Group was recommended as a way of dedicating resources to solve the problem as well as increasing communications between the stakeholders. [39:p. ii]

To further reduce friction, all process pre-award personnel should ensure that DCAA is notified of new contract awards that will eventually require an audit will allow

the agency to plan for the future work and properly allocate its resources to better support the closeout process. [56]

2. Inadequate Information Technology

Utilize information systems that track major milestones in the contract life-cycle in order to have better visibility into the status of the work in process. [56]

3. Long-Life Contracts

Utilizing firm fixed-price type contracts for lengthy requirements can ease the audit requirements and speed up the closeout process. [56]

4. Personnel Skill Levels

Ensuring that all contract specialists are cross-trained may help to emphasize the attributes of writing good contracts as well as polishing post-award contract administration skills. [56]

5. Contract Financial Issues

Funding issues can be addressed by incentivizing the buying activities to prioritize contract closeouts by expanding the use of expired funding freed up as a result of expedited contract closeouts. Periodic financial reconciliations conducted during the life of the contract can also ease the burden after the contract is physically complete. [5:p. 9] Early reconciliation can also be aided by sharing Government data, to include disbursement and obligation histories, with the contractor for their evaluation and input. [14:p. 4]

DCAA recommends that (1) cost and fee not be broken out by CLIN unless necessary, (2) DCMA is provided proof of completion if DD -250s are not required, and (3) limiting the number of ACRNs to reduce the risk of canceled funds. [36]

6. Management Concern

All stakeholders need to see the contract closeout process as an important part of the overall acquisition cycle. As such, the closeout process should begin during acquisition planning and not wait until physical completion of the contract. [5:p. 3] All stakeholder personnel, to include pre-award contracts personnel, should be well aware of the closeout process and procedures through specific cross-functional training regimes. All stakeholders should have their performance appraisals tied to contract closeout

metrics. (2, p. 7) Furthermore, establishing a centralized closeout function can raise the emphasis and priority of the contract closeout process within an organization. [56]

7. Perceptions

Personnel may be motivated towards higher contract closeout productivity if top performers were recognized with incentive awards. [56]

8. Timeliness

Another early step that can be taken is to turn on the contract closeout process early in the acquisition cycle. Some suggest 9-12 months before contract completion. [56:p. 6] Systems to track contract age can help in getting these contracts closed within the required FAR timeframes. [56] Pre-award personnel should ensure that contract closeout requirements are reinforced at post-award orientations as well as any contract meetings toward the end of the period of performance of the contract. [56]

9. Problem Process Steps

Buying activities should be encouraged to issue more fixed-price type contracts that require fewer and less complicated steps to properly closeout. [56] Buying activities can also utilize special contract provisions to expedite the contract closeout process or establish effective controls to provide an incentive to contractors for achieving a timely contract closeout. (4, p. 76)

ACOs could maximize their authority to unilaterally determine rates in an effort to ensure that final vouchers are submitted by contractors in a timely manner.

The possibilities of accepting a contractor's independently audited and certified Indirect Cost Rates could be investigated. (4, p. 74)

10. Existing Backlogs

DCMA Phoenix came up with an innovative approach to staffing shortages. They used several Naval Reservists during a trial period in FY1999. They were pleased with the results and liaisoned with the Commanding Officer of nearby Naval Reserve DCMD Detachment for a formal follow-on effort. Ten officers meeting the required qualifications volunteered and worked a rotating, overlapping schedule for six months. Their specific mission was to target a multitude of aged contracts for closeout. During this time the Reservists were able to close 43 contracts and recoup $4.6 million of canceling funds. [32]

The Department of Energy has organized a Contract Closeout Business Line that handles the Department's closeout activities in a centralized method. This organization is staffed by two Government employees and ten contractors who close contracts that utilize the Working Capital Fund. Contract backlog had been decreased from 2,927 in FY 1996 to 1,304 in FY 2000. [9:p. 6] The productivity baseline of this organization is as follows:

Instrument Type	Standard in Hours	Customer Unit Cost
Purchase Order	6	$240.00
Firm Fixed-Price	6	$240.00
Interagency Agreement	6	$320.00
Financial Assistance	11	$440.00
Cost-Reimbursement	124	$4,960.00

Utilizing reforms or streamlining initiatives may allow a backlog to be decreased. This may involve using quick-closeout procedures, performing risk assessments, and using rate checks vice full audits. [56]

11. Inadequate Manpower

There have been examples of commands successfully contracting out the contract closeout process. The Naval Air Warfare Center Aircraft Division contracted out to Tessada & Associates, Inc., to reconcile and close a backlog of over 30,000 contracts, as well as to reconcile and close contracts as they become physically complete. In the first two and a half months alone, Tessada had liquidated $27,100,000 in canceling funds that were released for payment. This was a return on investment of 6000 percent-- 60 times the initial investment of the cost of the contract. In the three years that followed, Tessada recouped an additional $400 million in canceling funds. [49]

The FAA utilizes a combination of contractor and Government employee efforts to closeout contracts. In FY 2001, they awarded a three year follow-on contract to Cameron Consulting Group, a Socially Economically Disadvantaged Business (SEDB) for $1.4 million. That year the contractor closed 83 contracts for a total value of $451 million. In FY 2002, the FAA set a goal to have every warranted contracting officer at their HQ unit close at least three contracts, one of which must be a complex contract. [22]

If unable to get additional manpower or contractor support, contract closeout can be emphasized during times of the year when regular pre-award workloads are low. [56]

12. Records and File Documentation

Creation of separate folders or contract sections specifically for the key contract closeout documents can save valuable time for personnel conducting the closeout. [5:p. 5] Utilization of specific closeout checklists may also help in the organization and documentation of contract closeout files. [56]

F. SUMMARY

In summary, contract closeout is a material control weakness that has been recognized since at least 1991 and the problem continues to exist despite increasing visibility and concern in the host Command. [37:p. 9] If the growing backlogs are allowed to continue, contracts will be more difficult to close and the potential liability associated with the contract closeout backlog will continue to increase. Additionally, we have introduced a set of historical pathologies and potential solutions based on the current literature. In Chapter III, the Organization Systems Framework Model will be applied to the generic contract closeout process.

III. CONTRACT CLOSEOUT AND THE ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL

A. INTRODUCTION

In this chapter we will examine contract closeout activities utilizing the Organizational Systems Framework Model (OSFM) as an analysis tool. This examination will reveal factors and interactions that have occurred which contribute to the evolution of the current status of the contract closeout process. As previously mentioned, the OSFM looks at three major areas that will affect an organization. These are: (1) inputs, (2) throughput, and (3) results.

B. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL INPUTS

There are three factors that make up the inputs portion of the OSFM. These are (1) environmental/context, (2) key success factors, and (3) system direction. These three factors exert influence on throughput and are in turn influenced by results.

1. Environment/Context

Environmental/context factors include items that can be: (a) political, (b) economic, (c) social, or (d) technological in nature. Examples of all four can be identified in the contract closeout process. These factors are generally from outside the system. In the example of contract closeout these can be from outside the contract closeout process itself or from outside of the command or branch that is actually closing contracts.

a. Political

There are political pressures that can affect the contract closeout process. Politically at a high level, there is increased pressure to "fix" the Government-wide problem of contract closeout backlogs. [59:p. 2] [27:p. 1] The President and Congress are requiring that DoD account for its inefficiencies and streamline its costs. [41:p. i] External pressure to address and correct the problems associated with the contract closeout process is increased as a result of the various audits, inspections, and reviews that cover the closeout process and filter down through all levels of the contributing organizations. [59:p. 1]

Politics can include the friction between participating organizations including the buying command, prime contractors/subcontractors, Defense Contract Audit Agency (DCAA), and Defense Contract Management Agency (DCMA). This has contributed to process inefficiency through adversarial relationships and conflicting priorities. [5:p. 22]

Politically, rotations to contract closeout are not considered career enhancing. Over the years contract closeout has somehow obtained the reputation as a poor place to be. [5:p. 3] In fact, in the host Command, management has not filled the two unoccupied contract specialist billets within the Contract Closeout Branch (CCB). [37:p. 8]

b. Economic

The economic impacts to the contract closeout process are relatively straightforward when one considers dwindling DoD budgets. [59:p. 1] It is this external budgetary constraint that impacts the resources available for contract closeout. This is the traditional tradeoff of guns versus butter, but in this case guns correspond to pre-award and contract award activities while butter corresponds to contract closeout activities. With reduced resources, the increasingly overworked personnel are being allocated to pre-award and award activities. [59:p. 26] Fewer people are being made available to close contracts or spend their time closing contracts because there is not enough funding available to sufficiently man all activities in the acquisition process. [5:p. 18] Commands get more "bang for the buck" and more customer satisfaction by supporting pre-award and award activities. [7:p. 98]

This lack of resources means that millions of dollars are tied up in the contract closeout process. [34:p. 1] This is apparent not only in a buying command but also in the other commands that support the process such as DCAA and DCMA. [39:p. 3] The storage and handling of contracts awaiting closeout is space intensive and thus a costly effort. [59:p. 34] There has also been no analysis or study found in the literature that attempted to estimate the costs associated with maintaining a high backlog of aged contracts. These costs could include the man-hours required to address the backlog, the facilities and safe space to store the backlog, and the volume of replacement funds required due to untimely closeout. Many audits have addressed the fact that poor

contract closeout processes have resulted in the expiration and cancellation of funds that could have been recovered and used for other purposes. [41:p. i] After these funds cancel, if the contractor is still owed money, replacement funds must be obtained which in essence means the customer has paid for that portion of work twice in the budgetary process.

In an environment of Government and industry downsizing, resource managers are focusing efforts on mission critical projects. Contract closeouts are generally viewed as non-mission essential. [59:pp 2, 24] Part of this problem can be traced to economics.

From the contractor perspective there is little economic pressure to make contract closeout a priority. There are no substantial penalties for contractors who are unresponsive or lax in completing their contract closeout responsibilities. [7:p. 98] As a result, studies have indicated that contract closeout delays were attributed to the contractor 14%, 21%, and up to 42% of the time. [34:pp. 40,46] [59:p. 64]

Economics can also drive contractors to merge, reorganize, acquire other companies, or go out of business. All of these can help to make the contract closeout process more difficult than it already is. [16:p. 5]

Various initiatives are being studied and implemented in order to cut the costs associated with contract administration and specifically, contract closeout. The recent report from the Contract Closeout Working Integrated Process Team recommended initiatives costing $2,718,306 that would save DoD $25,030,531.[38:p. 4]

c. Social

Social factors include how society views civil servants. There have always been jokes made about the stereotypical Government employee who was rule-bound and not very smart. [10] Specifically, for those in the acquisition field there were cases of abuse or fraud that resulted in $7,600 coffee makers, $435 hammers, and $640 toilet seats. [43] These types of stereotypes and incidents can color how society views personnel in the contract closeout process.

Closer to home, there is the perception of those in the acquisition field towards contract closeout. Contract closeout lacks the emphasis and visibility of pre-

award activities. [5:p.18] Contract closeout has historically been perceived as the assignment of choice for poor performing contract specialists [5:p. 3] The work does not garner the sufficient priority required to attract and keep quality personnel. [25:pp. 22-23] A successful contract closeout process requires coordinated efforts of a multitude of people, organizations, and associated motivations. [53:p. 51] Process failure at any step significantly impacts other participants' efficiency. The success of the contract closeout process is heavily dependent on the social interactions and coordination of the involved participants. [59:p. 74]

d. Technological

Technological factors can impact the closeout process as well. Although there are several electronic and paperless initiatives under way [58:p. 2], the bulk of the work in the Closeout Branch is highly paper intensive. Many contracts that require closeout are in paper form. These must be tracked, stored, accessed, and finally stored after official closeout. Additionally, many of the current contract closeout steps require the routing of paper documents from one organization to another. One study found that the contract closeout process involved up to 55 hand-offs of paper from one individual to another. [53:p. 51] Figure 5 shows a brief example of how some paper documents currently flow in the closeout process.

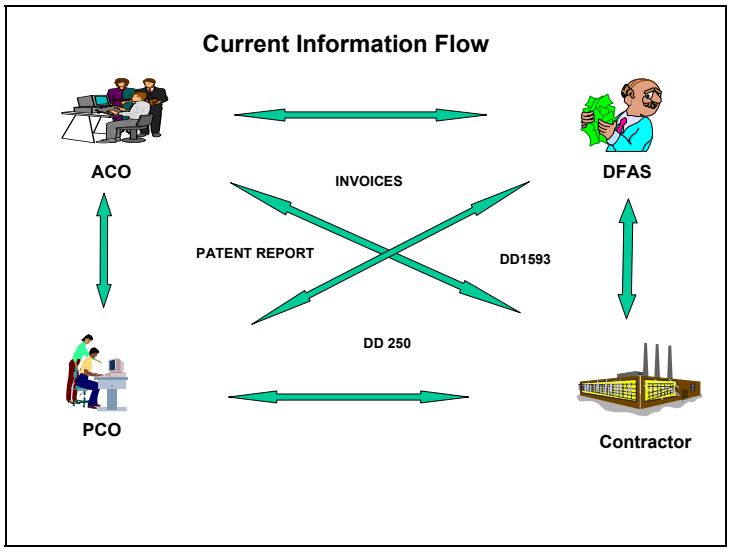

Figure 5. Paper Flow
[Source: From[38:p. 17]

There are also technological problems with information management and sharing.

Not all of the information systems are linked or can communicate with one another. [53:p.38] Additionally, not all of the data in the databases are correct; there are cases of discrepancies. [5:p.14] One recent audit found significant differences and data discrepancies between a command's Financial Management System and its contracts database. [37:p. 4]

2. Key Success Factors

Key success factors are the second major input. These describe what it takes for the system to be successful. The ultimate goal is the timely, accurate, and complete closeout of eligible contracts. This includes timeliness of each closeout event, expedited deobligation of excess funds for possible use elsewhere, identification of the need for additional funds as early as possible, expedited security clearance, and reduction of administrative costs for all the parties. Timely closeout minimizes the need to replace canceled funds with current year funding. Success might also be exhibited by a low or non-existent backlog, compliance with FAR timelines, and establishment of an acknowledged value-added process evident to the pre-award team and customer.

For this success to take place there are a few necessary requirements that must exist. One factor would be the increased priority of the contract closeout process. [34:p, 86] Priority would ensure that the process has the resources to complete the tasks. Not only does this include personnel, but also office space, information technology, and supervisory time and commitment. This applies to all organizations that participate in the closeout process, not just the buying activity or DCMA.

A second factor for success would be increased effective communication between all organizations and individuals involved in the contract closeout process. [34:p. 88] The relatively large number of organizations involved in the process requires communication methods that maximize effectiveness and efficiency to expedite the current process. Aside from the technological concerns of communication, one has to consider the interpersonal skills and relationships between individuals throughout the many organizations that play a role in the contract closeout process.

A third factor that can be considered is the existence of redesigned standard valid processes and procedures in which all participants are well trained. [53:p. 93] There are instances where personnel lack some basic knowledge of the closeout process or never receive formal training. [25:pp. 22-24]. This may lead to misunderstanding of roles and responsibilities amongst the participating organizations.

3. System Direction

The last major input factor is system direction. This includes all direction, internal and external, that impacts the closeout process. Examples include overarching mandates, organizational mission, vision, goals, and strategy/strategic issues.

A major mandate is the FAR, which requires many specific actions for closeouts. Many organizations have additional guidance to augment the FAR or address organizational unique situations. [28] Both the FAR and other instructions establish timelines and delineate numerous tasks in the contractual, financial and security areas required for closeout of contracts. The overarching Federal and Department of Defense regulations governing the contract closeout process are widely disseminated and available to all participants in the process.

Other system direction inputs require commitment from the top down. There must be values and a clearly understood mission. Strategic issues, vision and goals must be identified and understood in context of all the people involved in the process. Strategies must be developed for short and long term achievement of closeouts. Current host Command direction includes broad or generalized contract related mission, vision, and goal information that encompasses the entire acquisition process without specific reference to the closeout process or function. The host Command's mission is stated as

> We provide security and business support for designated special projects. We serve the Fleet and other activities while providing complete accountability and strict compliance with all applicable laws and regulations. [29]

This would certainly cover the closeout process as an important part of business support or in complying with regulatory closeout requirements.

The organization's vision is equally as broad and overarching:

> This vision statement is a word picture of the desired end state of the command at the culmination of its planning horizon. The command's vision reflects our firm intent to be a lean, process-driven, best value supplier of information, business, security and logistic systems, products and services for our customers. The vision manifests our pledge to provide integrity, excellence, and security while delivering maximum convenience and dependability to our customers. We will continue to strive to become the Navy's and DOD's most innovative enterprise and preferred provider. Customers using "One-Stop Shopping" will need only a single access point to select from a broad range of products and services. The process by which the appropriate products and services are selected, assimilated into an integrated support system, and managed as a total entity is tailored, completely visible, effective and dependable with little or no requirement for day-to-day "hands-on" involvement on the part of the customer other than oversight and status tracking. The support provided is proactive and anticipates the customer needs. [29]

This vision also has an important place for the closeout process in providing customer support and the concept of the one-stop-shop.

The Command is focusing on developing a strategy that includes designing and implementing a business process for contract closeouts that corrects the impediments to maintaining accurate and timely funding, contract databases, and contract files. [29] Management's current plan is to develop metrics that address closeout cycle time, funds at risk for cancellation, percent of actions overage, percent of excess property reutilized, and certification of classified materials. Short-term goals include establishment of a plan of action and milestones to reduce the existing backlog to manageable proportions. Achievement of these goals requires the development of strategies to identify "at risk" contracts, create pre-award agreements to facilitate close-out process, establish strict penalties for late submission of final invoice and overhead rates, develop more comprehensive and meaningful performance metrics, improve Quick-Closeout procedures, and allow DCMA to close-out contracts with interim rates. [29]

The host Command has a documented philosophy based on four basic premises [29]:

1. Work as a Team
2. Find a Way
3. Develop and Empower Our People

4. Strive to Reach Our Fullest Potential

These philosophies can be very pertinent to the closeout process. With a centralized closeout branch it is easier to develop and foster a team mentality not only among the command's personnel but also between these personnel and external entities that they interact with on a daily basis. [59:p. 77][7:p. 102]

In an effort to foster a workforce that delivers and sustains world-class performance, the host Command has developed strategies that include development of recommendations from organizational climate survey focus groups, becoming a Learning Organization, establishing a requirements driven process that ensures recruitment and retention of a diverse workforce with the right skills and of the right size, fostering an environment that promotes a high quality work life, assists employees in adapting to change and facilitates career planning, and facilitating a culture where the values and guiding principles are practiced by all personnel. [30]

C. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL THROUGHPUT

Throughput or design factors are the next elements of the OSFM to be discussed. These are generally shaped in part by the input and in turn go on to shape the results. Design factors include: (1) task/job, (2) technology, (3) structure, (4) people, and (5) processes/subsystems.

1. Task/Job

The task/job of contract closeout is a fairly well-defined series of tasks, many of which can be performed in parallel, though some must be performed sequentially before others. These tasks are the 15 basic tasks as defined by the FAR that were discussed in the Chapter II. FAR [21:4.804-5(a)] delineates the 15 key tasks associated with the contract closeout process as follows: (1) disposition of classified material, (2) final patent report clearance, (3) final royalty report clearance, (4) value engineering change proposal (VECP) closure, (5) plant clearance, (6) property clearance, (7) settlement of interim or disallowed costs, (8) price revision completion, (9) subcontracts settlement, (10) prior year indirect cost settlement, (11) termination docket completion, (12) contract audit

completion, (13) Contractor's closing statement completion, (14) Contractor's final invoice submittal, and (15) final contract funds review and deobligation of excess funding. Once all of the applicable tasks are successfully completed and documented, the contract can be officially closed.

It must be remembered that the contract closeout process requires the integrated efforts of multiple organizations with varying missions and organizational structures. [5:p. 23] For example, DCMA has general responsibility for managing the contract closeout process in strict compliance with the FAR, but has no authority to prioritize the efforts of other contributing organizations. [5:p. 23]

The Contractor is responsible for providing subcontracts settlement completion statements, prime contract closing statements, and final invoices. DCAA is responsible for providing audit services as required. Contract closeouts are a small subset of each organization's mission but are an acquisition process requirement.

2. Technology

The second design factor is Technology. Technology has been discussed in the context of an external input but as a design or throughput factor we are more concerned with workflows, Information Technology (IT) and facilities.

The contract closeout workflow is complex and involves significant amounts of interdependency between process events and performing organizations. The process is labor and paper intensive in the form of auditing, reconciliation, and validation services provided by the various supporting organizations. [53:p. 51]

A key control of the workflow is the timelines found in the FAR. [21: 4.804-1(a)] establishes a six-month closeout requirement for FFP contracts after the Government receives evidence of physical completion. Cost-Reimbursement type contracts must be closed out within 36 months after the Government receives evidence of physical completion. All other type contracts must be closed in 20 months. This establishes rigid confines on the workflow.

Key interdependencies basically involve the documentation and certification that the 15 basic closeout steps have been completed. In some cases the contractor is certifying information such as patent/royalty issues, in other cases the Government is

certifying the contractor's submission by auditing the contractor's financial records. Key to these steps is access to the necessary data or systems when required. [53:p. 51]

3. Structure

The third design factor to be discussed is Structure. By structure we mean how activities and personnel are grouped, the hierarchies, and how roles are integrated. The contract closeout process involves the integrated efforts of personnel within five different major organizations including the buying activity, contractors, DCMA, DCAA, and DFAS.

The host Command is a Navy organization consisting of both military and civilian personnel directed by an O-6 military officer and Senior Executive Service (SES) member. The Command is headquartered at a central location and includes various field offices. The Command's headquarters contracting and comptroller offices are responsible for contract closeouts. Both offices are matrix organizations supporting the overarching Command mission and the various programs/projects within the host Command. Generally, each office is hierarchical with a GS-15 Director, GS-14 Branch Heads, and staff at GS-13 and below levels. The Directors report to upper level Command management. It should be noted that the Command provides its own payment services instead of utilizing the Defense Finance and Accounting Service (DFAS) who provide customary payment services for the Department of Defense (DoD).

The contract closeout branch currently consists of four GS-12 contract specialists and one GS-13 Branch Head/Contracting Officer. A fulltime accounting technician, budget analyst, and two contract librarians support these contracts personnel. Legal counsel and security personnel provide part-time support. This branch comes under the Central Functions Division (led by a GS-14) which in turn comes under the Director of Contract Policy (GS-15), who comes under the Director of Contracts (GS-15).

Contractors vary in size, structure, and geographical location. In general, contractor comptroller and contracting offices are responsible for the contract closeout process. Each office may consist of varying levels of management.

DCMA and DCAA are DoD organizations consisting of both military and civilian personnel directed by O-6 or above military officers and SES members. DCMA and

DCAA are headquartered at different central locations. Contract closeout related services are provided from either regional or resident Contractor-site locations. Regional and resident offices are generally staffed by O-6 and below military officers and GS-15 and below civilians.

The host Command acquires various supplies and services from supporting Contractors to meet Navy needs. DCMA supports the host Command by providing administrative services such as performance measurement, quality assurance, and contract administration. DCAA supports the host Command and DCMA by providing audit services.

4. People

People are the fourth design factor to be examined. The knowledge, skills, and abilities of responsible contract closeout participants between and within organizations differ. Training and career development opportunities focus on high profile, dynamic projects rather than low priority, slow paced projects. Both Government military/civilian and industry personnel support the Contract Closeout process. Specific contract closeout efforts are generally service related involving contracting, financial, supporting, and management personnel. Although the functional effort required to process contract closeouts is similar across organizations, the knowledge, skills, abilities, motives, expectations, and mindsets of personnel within and between organizations are different. [5: p22] All organizations range in level of expertise from intern to seasoned professional.

Host Command contracting personnel are primarily motivated to process and execute new procurements to support the war fighter with administrative matters being a secondary responsibility. Contractor contracting personnel are motivated to maximize corporate profits by executing either new business or administrative actions depending on size and cycle time tradeoffs. DCMA contracting personnel are primarily motivated to execute administrative actions with new procurement activity being of secondary importance. Since the acquisition field is very broad, personnel in the different organizations tend to become proficient in those areas of importance to the organization.

Host Command financial personnel are divided between budget and accounting office personnel. Budget personnel primarily focus on Planning, Programming, and Budgeting System (PPBS) and associated obligations execution. Accounting personnel are primarily motivated to ensure proper categorization and accuracy of obligation execution. Contractor financial personnel are primarily motivated to maximize rates of return on corporate investment performing both investment and accounting functions. DCAA predominantly employs accountants whose primary responsibility is to provide audit services as required.

Host Command supporting and management personnel are generally focused on providing the maximum supplies and services to the war fighter legally and within the approved budget. Contractors' supporting and management personnel are primarily motivated to maximize profit. DCMA supporting and management personnel are primarily motivated to ensure that the contractor performs in compliance with regulations and the terms of the contract. DCAA is primarily motivated to provide a wide range of audit support and to uncover performance irregularities and non-compliances.

5. Process/Subsystems

The fifth and final design factor is Process/Subsystems. The contract closeout process is a small subset of the overall missions of the contributing organizations and consequently receives low priority with respect to organizational resource management. [25:p. 22] The contract closeout workflow is fairly rigid and sequential. A number of different functional disciplines at each organization are required to successfully closeout a contract. Staffing within these functions have dissimilar motivations and priorities. [5:p. 22]

Overarching processes and subsystems in support of the contract closeout process include financial management and control, human resource management, organizational communication and decision-making, and acquisition management.

The Government PPBS drives Defense industry performance, accountability, and control. In support of annual Executive and Legislative Branch review the host Command must provide a detailed plan of execution by type of appropriation and program. This plan is generally developed by Government budgeting personnel, with the

support of contributing Government and contractor organizations, and is based upon individual program performance. Failure of individual programs to perform within the prior year can materially impact the amount of budget provided for the next year. In this environment each organization is highly motivated to expend available budget and maintain program schedules. An adverse effect of this environment is that low priority requirements, such as contract closeouts, tend to receive little programmatic attention. This same process puts pressure on the branch to ensure that expired funds are liquidated before they cancel. It is interesting to note that the Closeout Branch is primarily responsible for the liquidation of canceling funds and not the original PCO or Program Manager. In the event that funds cancel it is the responsibility of the closeout branch to contact the appropriate program office and secure replacement funds. This is seen as a failure of the closeout branch rather than a failure of the program manager to properly manage his funding.

The accountability required by the PPBS poses additional problems within the contract closeout process. Appropriation law requires the proper funding to be used for a given requirement. Different Navy Appropriations include Ship Construction Navy (SCN), Other Procurement Navy (OPN), Operations and Maintenance, Navy (O&M, N), Weapons Procurement Navy (WPN), Aircraft Procurement Navy (APN) and Research, Development, Test, and Evaluation (RDT&E). Appropriation status consists of three stages including active, expired, and closed. Appropriations can be obligated at any time and for any related supply and service during its active life. Appropriations have different active lives as follows: SCN, 10-12 years (unique for each hull); OPN, three years; O&M, N, one year; WPN, three years; RDT&E, two years. After an Appropriation expires it can only be used for outstanding commitments not new obligations. The expiration period for each Appropriation is five years at which time the Appropriation is closed. After an Appropriation is closed it can no longer be used. As contract closeout backlogs increase, the host Command can find itself in a dilemma where money is owed the Contractor, the money is closed and can't be used to pay the Contractor, and a new Appropriation of the same type must be used to pay the liability. Use of a new Appropriation for this purpose depletes new procurement funding.

Much has been written about the pending retirement of nearly 50% of the Government workforce within the next five to ten years. [45] Human resource specialists have expended significant effort in responding to this threat. Marketing campaigns have focused on high visibility, dynamic, and career enhancing projects and career paths. Employees who perform well on such projects can achieve recognition along with increased opportunities for advancement and bonuses. In consideration of providing equal opportunity for its employees the Government provides generally equal access to training programs that provide the employee with the knowledge, skills, and abilities to perform exceptionally in a dynamic environment. This environment has not benefited low priority tasks like contract closeouts. In addition, the varying missions of the organizations require dissimilar employee strengths and weaknesses that complicate cross-organizational performance.

The communication and decision-making processes are generally hierarchical in DoD organizations. The host Command is delegated authority by the Secretary of the Navy (SECNAV) to manage programs and is given wide operational latitude. Employees within the host Command are empowered to the limits of delegated authority and are expected to solve problems on routine matters. Only significant problems relating to the key organizational mission are elevated to upper level management. DCMA and DCAA are similarly delegated operational authority by the Secretary of Defense (SECDEF). Contractors are under contract to deliver supplies and services to the host Command. As such, they typically structure their decision-making process to the host Command hierarchy. In addition, Contractors have a parallel communication chain that reaches from product line through various levels of management to the company's Board of Directors and Chief Executive Officer.

Internal and external communications between and within contributing organizations range in media richness and include face-to-face meetings, telephone calls, Email, business letters, memorandums, notes, and special reports. Critical issues are customarily communicated through face-to-face or telephone meetings while low priority issues are communicated through Email or memorandum. This communication environment results in minimization of the significance of the problem.

The acquisition management process is regulated by statute, regulations, and procedures. The Legislative Branch provides the required authorization and appropriation for the Executive Branch to fulfill mission. Host Command program managers, contracting officers, lawyers, budgeters, and accountants are provided various authorities to manage the acquisition process. Although the overall mission of the host Command organization is shared between these functions, each function has different operational motivations and priorities. Program managers are focused on providing high performance, quality supplies and services to the fleet in a timely and cost effective manner. Contracting Officers are focused on legally and efficiently maximizing the value obtained through the expenditure of taxpayer dollars. Lawyers are focused on protecting the Government's legal rights. Budgeters are focused on fully obligating current appropriated dollars and obtaining maximum future year budget. Accountants are focused on managing funding in the most effective manner possible.

The Contractor, DCMA, and DCAA provide support to the host Command in achieving its mission. The Contractor performs under the contract and delivers the supplies and services. DCMA provides administrative support including performance monitoring, quality assurance, and contract administration efforts. DCAA provides auditing services as required. In summary, each organization prioritizes acquisition work in process.

D. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL RESULTS

The results portion of the OSFM consists of: (1) culture, (2) outputs, and (3) outcomes. These factors are influenced by the throughput or design factors and these in turn influence the input factors.

1. Culture

Cultural issues influence the results of the closeout process. This includes the level of motivation of the personnel, the skill level of personnel, and how external personnel view closeout personnel. Self-perception of the contract closeout personnel plays a large role in defining the current culture of the branch.

2. Output

Outputs of the system are closed contracts. This involves the reduction of risk to the Government as well as the final recouping of all Government property and funds. The actual physical product is an optically scanned copy of the fully closed contract. Hard copies of all other records are destroyed, thus freeing up valuable storage and warehousing space. The different types of actions completed per negotiator are tracked as well as the status of liquidating canceling funds. However, these data have not been used in a formal system to evaluate personnel performance or provide motivation to increase the volume of work completed in the past. Negotiators are assigned a set of contractors that they are responsible for in closing out all contracts. Personnel are allowed to pick and choose which actual efforts they work on. This gives rise to "cherry picking". Personnel tend to choose the easiest actions to close such as delegated task orders. This means that the harder or more complex actions get pushed to the back of the safe. Over time these actions become progressively more difficult to close as corporate knowledge leaves the organization. Poor use of metrics also makes it hard to ensure that workloads are balanced. It is difficult to ascertain that all of the personnel are exerting the same amount of effort based on the wide variety of contract types and actions that they may be trying to close. Recent Department of Energy baseline closeout metrics provide a possible standard from which to start.

Type of Instrument	Standard
Firm-Fixed-Price	6 hours
Cost-Reimbursement	124 hours

In many cases the outputs of the contract closeout process are either transparent to the customer or have negative connotations. There are few instances of positive outcomes that become apparent to the customer. In the current situation, a good contract closeout has no issues and does not require any additional funding. The program office is usually not even aware the contract is closed. In their eyes the contract was over when the period of performance ended and they received the products or services that they desired. In many cases, the negotiation of final rates requires additional funds or funds

cancel before final invoices get paid and these funds need to be replaced. These are the scenarios that help to put contract closeout in a bad light. The customer is frustrated by having to use current year funds to pay for something that originally had prior year funds available, yet the Program Office staff has access to the same financial management systems that provide these data.

Metrics such as contracts closed and funds canceling have always been used to measure the efficiency and effectiveness of the contract closeout process. The host Command monitors which contracts have periods of performance that end each month. This information is provided to the Contracting Officers as an impetus for them to start their processing to get the contracts transferred to the closeout branch. Canceling funds are closely monitored on a monthly basis with tracking of total percent liquidated by either deobligation or invoice payment. The number of contract actions closed each month is monitored as well as the total number of contracts still awaiting closure.

3. Outcomes

Lastly, there are the outcomes of the closeout process. The increased backlog means that there are even more problems, claims, and canceling funds that take up time. This in turn causes fewer contracts to be closed out as resources are directed to the immediate priorities that arise. The end customer, the program manager, is often unaware of the status of his completed contracts and has to provide replacement funds for contracts that should have been already closed. Vast storage areas and man-hours are required to handle the backlog of contracts. This is further complicated by the security requirements that necessitate storage in a certain class of safe, which must be purchased and maintained. Finally there is the increased visibility that is being directed at the closeout process. Any organization that is failing to closeout contracts in a proper and timely manner is going to get unwanted scrutiny from higher commands, auditors, and inspectors. An out of control contract closeout process not only puts the command in a bad light but reflects individually on the Commanding Officer and every supervisor in the closeout chain of command. Additionally it reflects poorly on the actual closeout personnel as well. Such a situation requires additional resources to fix. This is an issue in light of decreasing budgets and the overall reduction in the acquisition workforce. Not only are resources required to fix the problem but also there will be additional resources

required due to the problem (replacement funds). Poor closeout processes in an organization that aims to be a quality acquisition service provider from cradle-to-grave shows that we are not as serious about our goals as we should be. Additionally, as stewards of the taxpayers dollars we are not following through on our responsibilities.

E. CHAPTER SUMMARY

In this chapter we examined the current contract closeout process and situation at the host Command using the Organizational Systems Framework Model as a discussion guide. In doing so, we have identified many of the factors and issues that combine to shape and impact the process and organization which results in the current outcome. This information will be utilized in conjunction with Chapter V, Data Analysis, to provide a basis for Chapter VI, Conclusions and Recommendations.

IV. SURVEY DATA PRESENTATION

A. INTRODUCTION

The purpose of this chapter is to present the data that were collected via the Contract Closeout Survey. This survey was disseminated electronically and in hard copy format to a wide variety of personnel across the many organizations that participate in the contract closeout process to include contractors, DCMA, DCAA, DFAS, and buying activities. Forty questions were asked in order to gain insights into the contract closeout process and pathologies. Questions were developed and framed with the OSFM in mind. Data are presented by question asked within this chapter. Questions are grouped according to the area of the OSFM to which they correspond. A total of 102 surveys were returned in time for inclusion into this paper. Appendix A contains the sample survey. Analysis of these data will be provided in Chapter V.

The data are presented in the following four sections. Section B contains the general demographic data. Section C contains data relating to OSFM inputs. Section D contains data relating to OSFM throughputs. Section E contains data relating to OSFM results. Section F contains a brief summary of the data as applicable to the OSFM. Section G contains a brief chapter summary of the data collected.

B. DEMOGRAPHICS

Basic demographic data were collected to assist in determining the validity and veracity of the data. Additionally these data will be useful in identifying trends that can be linked to certain demographic data. These data collected include information such as respondent organization, functional area, experience level, and education.

Question 1 asked what organizational role did the respondent fill in the contract closeout process. This question was asked in order to break out respondents by major organization and function within that organization. The question categorizes survey respondents by their participating organization. Table 1 gives the detailed breakdown of the surveys collected. Table 2 gives the same information rolled up to the organizational level. The majority of responses (57%) were obtained from "Buying Activities". The

fewest responses (4%) were obtained from DFAS. DFAS is not an active participant in the contract closeout process as performed by the host Command, however they were included in the survey in an effort to get the widest feedback possible. From a detail level, the majority of the responses appear to be from personnel in the 1102 series, which would include contract specialists, contract administrators, ACOs, and PCOs.

Table 1 Organizational Role

Role	Frequency	Percent
DCMA Contract Administrator	4	4%
DCMA ACO	9	9%
DCMA Supervisor	1	1%
DCMA Operations Chief	3	3%
DCMA Other	2	2%
Contractor Journeyman Contract Administrator	3	3%
Contractor Supervisory/Senior Contract Administrator	3	3%
Contractor Other	2	2%
DCAA Supervisory Auditor	2	2%
DCAA Auditor	4	4%
DCAA Financial Advisor	5	5%
DCAA Other	2	2%
Buying Activity Procuring Contracting Officer	9	9%
Buying Activity Contract Specialist	31	30%
Buying Activity Finance	9	9%
Buying Activity Legal	1	1%
Buying Activity Security	6	6%
Buying Activity Other	2	2%
DFAS Accountant	1	1%
DFAS Other	3	3%
Total	102	100%

[Source: Developed by researcher]

Table 2 Organizational Roll-Up

Role	Frequency	Percent
DCMA	19	19%
Contractor	8	8%
DCAA	13	13%
Buying Activity	58	57%
DFAS	4	4%
Total	102	100%

[Source: Developed by researcher]

Question 2 asked the respondent to identify their level of experience working within the Federal Government acquisition process. This question was asked in order to ascertain the basic level of acquisition experience of the respondent. Table 3 breaks out the years of experience that the survey respondents have with the Federal Government acquisition process. The majority of the respondents (69%) have over eleven years of experience working in the acquisition process. Only 13% of the respondents have five or fewer years of acquisition experience. Another 18% reported six to ten years of experience.

Table 3 Federal Acquisition Experience

Years of Experience	Frequency	Percent
< 1 Year	4	4%
1-5 Years	9	9%
6-10 Years	18	18%
11-15 Years	27	26%
16+ Years	44	43%
Total	102	100%

[Source: Developed by researcher]

Question 3 asked the respondent to identify their level of expertise with the contract closeout process. This question was asked in order to ascertain the basic level of contract closeout expertise of the respondents to ensure that follow-on questions about contract closeout have relevant and valid responses. Table 4 breaks out the self-described level of expertise that the respondents have with the contract closeout process. As one would expect, based on the results of Question 2, the majority of respondents (78%) have moderate to extensive expertise on the contract closeout process. Only 22% of the

Table 4 Contract Closeout Expertise

Level of Expertise	Frequency	Percent
None	3	3%
Very Little	19	19%
Moderate	43	42%
Extensive	37	36%
Total	102	100%

[Source: Developed by researcher]

respondents had little or no expertise with the contract closeout process.

Question 4 asked the respondent to identify their level of experience with the contract closeout process. This question was asked in order to determine if there is a link between the levels of expertise of individuals based on the level of experience with the contract closeout process. Table 5 breaks out the years of experience that respondents reported working with/in the contract closeout process. In this instance, only 32% of the respondents had eleven or more years of contract closeout experience. In fact, almost half (49%) of the respondents had five or fewer years of experience in contract closeout. Additionally, 19% of the respondents had between six and ten years of experience while 1% of the respondents did not answer the question. It appears that most personnel feel that they gain a moderate amount of expertise after only several years of experience.

Table 5 Contract Closeout Experience

Years of Experience	Frequency	Percent
< 1 Year	21	21%
1-5 Years	29	28%
6-10 Years	19	19%
11-15 Years	15	15%
16+ Years	17	17%
No Answer	1	1%
Total	102	100%

[Source: Developed by researcher]

Question 5 asked the respondent to identify the highest level of education they had reached. This question was asked in order to determine if the level of education of the respondents had a role in the process. Table 6 breaks out the highest level of education that respondents had obtained. A full 81% have a college degree or higher. Only 1% of the respondents have had no college education at all. There were 16% of the respondents who had at least some college experience. Based on the number of years experience respondents had, it is not surprising that so many have had college or higher degrees. This may also be indicative of the pressure put on acquisition personnel to get Defense Acquisition Workforce Improvement Act (DAWIA) certified at higher levels.

Table 6 Education Level

Highest Education Level	Frequency	Percent
High School	1	1%
Some College	16	16%
College Degree	56	55%
Graduate/Postgraduate Degree	27	26%
No Answer	2	2%
Total	102	100%

[Source: Developed by researcher]

Question 6 asked the respondent to identify the grade range that they currently occupy. This question was asked in order to ascertain the General Schedule (GS) grade spread of the respondents that reported to be Federal employees and correlate this to their stated level of expertise. Table 7 breaks out the grade structure of the respondents who categorized themselves as Federal employees. Eighty-three percent are at the GS-12 level or higher. There were 6% of the respondents that fell into the GS 8-11 range. Only 2% were GS-7 or below. There were 10% of the respondents that did not answer. The eight contractor responses make up the bulk of the "No Answer" category. Once again, based on the years of experience that respondents had, one would expect a corresponding grade spread toward the high end.

Table 7 Federal Grade

Grade Level	Frequency	Percent
GS 1-7	2	2%
GS 8-11	6	6%
GS 12-13	65	64%
GS 14-15	19	19%
SES	0	0%
No Answer	10	10%
Total	102	100%

[Source: Developed by researcher]

Question 7 asked members of the military to identify their rank. This question was asked to determine if any noted trends were reflected in both the civilian and military

populations surveyed. No military members completed the survey. The results are reflected in Table 8.

Table 8 Military Rank

Rank	Frequency	Percent
E 1-5	0	0%
E 6-9	0	0%
WO	0	0%
O 1-3	0	0%
O 4-6	0	0%
No Answer	102	100%
Total	102	100%

[Source: Developed by researcher]

Question 8 asked the respondent to identify the level at which they are DAWIA certified. This question was asked in order to ascertain how many respondents were pursuing DAWIA certification and at what level were they currently at compared to their years of experience and grade. Table 9 breaks out the DAWIA certification level of the respondents. Sixty-two percent have attained some level of certification. Some respondents were expected not to have attained certification since there are some career fields not covered by DAWIA. An example would be for those personnel working in the area of security. It is expected that such respondents would have selected the "N/A" or "No" choice. Being that 81% of the respondents have college or graduate degrees and 69% have over 11 years of experience in Federal acquisition, one might expect that there would be a greater number of personnel certified at the higher levels. Furthermore, 83%

Table 9 Defense Acquisition Workforce Improvement Act

DAWIA Level Certified	Frequency	Percent
N/A	25	25%
None	9	9%
Level I	6	6%
Level II	23	23%
Level III	34	33%
No Answer	5	5%
Total	102	100%

[Source: Developed by researcher]

of the respondents are at the GS-12 level or above and they would be seeking the certifications often required for the higher-grade levels.

C. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL INPUTS

This next series of questions are concerned with areas that fall in the input section of the OSFM. This includes environmental factors, key success factors, and system direction.

Question 9 asked the respondent to identify the level at which they believe their command communicates the fact that contract closeout is an important function. This question was asked to determine the system direction as perceived by the respondents. In this question we are addressing the ways that the command may communicate that importance. Table 10 breaks out the perceived level of importance of the contract closeout function by command. Fully 71% of the respondents thought their command communicated that the contract closeout function was at least somewhat important. Only 15% of the respondents thought that their command communicated that the contract closeout function was at best, somewhat unimportant. Ten percent responded with "neutral either way" and 4% of the respondents did not answer the question.

Table 10 Command Importance

Level of Importance	Frequency	Percent
Not important at all	3	3%
Somewhat unimportant	12	12%
Neutral either way	10	10%
Somewhat important	34	33%
Extremely important	39	38%
No answer	4	4%
Total	102	100%

[Source: Developed by researcher]

Question 10 asked the respondent to identify their own opinion as to the level of importance of the contract closeout function. This question was asked to see if there was agreement between command (system) direction and personal belief. Table 11 breaks out the personal belief of the respondent as to whether they believe that contract closeout is

an important function. Eighty-nine percent thought that contract closeout was at least somewhat important. Only 4% felt that contract closeout was somewhat unimportant. There were 4% each respectively that were "Neutral either way" or did not answer the question. It seems that in general, more respondents felt that contract closeout was more important than their command's belief. It is also important to note that not one respondent thought that contract closeout was "Not important at all."

Table 11 Personal Importance

Level of Importance	Frequency	Percent
Not important at all	0	0%
Somewhat unimportant	4	4%
Neutral either way	4	4%
Somewhat important	36	35%
Extremely important	54	53%
No answer	4	4%
Total	102	100%

[Source: Developed by researcher]

Question 11 asked respondents to identify the level at which their command behaved in regards to taking actions that reinforced the premise that contract closeout was an important function. This question was asked in order to ascertain a command's behavior towards contract closeout and compare that with what they communicate to the respondents. Table 12 breaks out the respondents' perceptions of their commands' behavior towards the contract closeout function. Only 56% of the respondents felt that their command behaved in a manner that showed the contract closeout process is at least somewhat important. Twenty-five percent felt that their command behaved in a manner that showed contract closeout was somewhat unimportant or not important at all. Sixteen percent though their command was neutral either way, and 4% did not provide an answer. This seems at odds with the results of Question 9.

Question 12 asked the respondent to provide the top three factors required of a successful contract closeout process. This question was asked in order to identify key success factors applicable to the OSFM. Table 13 shows aggregate responses of key success factors. The researcher logically grouped the reported key success factors based

on similarity of responses. Not all of the data are shown; responses repeated two or fewer times were dropped in order to make the data more manageable. Additionally, some responses actually contained more than one unrelated factor. These were separated by the researcher and sorted into the appropriate category. This explains the fact that there were more than the expected 306 factors recorded. By far, the top two key success factors for the contract closeout process are good contract records/documentation/points of contact (15%) and teamwork/cooperation/coordination (14%).

Table 12 Command Behavior

Level of Importance	Frequency	Percent
Not important at all	6	6%
Somewhat unimportant	19	19%
Neutral either way	16	16%
Somewhat important	24	24%
Extremely important	33	32%
No answer	4	4%
Total	102	100%

[Source: Developed by researcher]

Table 13 Key Success Factors

Success Factor	Frequency	Percent
Good Contract Records/Documentation/Points of Contact	47	15%
Teamwork/Cooperation/Coordination	43	14%
Communication	22	7%
Skilled Manpower	22	7%
Knowledge/Training	21	7%
Time/Timeliness	21	7%
Management Focus/Priority/Commitment	19	6%
Audits/rates	17	5%
Good Process/Procedures	17	5%
Final Vouchers	12	4%
Information Technology/Management Information Systems	12	4%
Good Finance Records/Funding Verification	11	3%
Good Contract Administration	9	3%
Resources	7	2%
Physical Completion of Contract	6	2%
Dedication	6	2%
Persistence	5	2%
Organization	4	1%
Prudent Decision Making/Risk Assessment	3	1%
Totals	315	100%

[Source: Developed by researcher]

These factors were followed by another grouping, which included communication, skilled manpower, knowledge/training, and time/timeliness.

Question 13 asked the respondent to identify economic factors that could impact the success of the contract closeout process. Table 14 cites the aggregate responses of economic factors that respondents thought could affect the contract closeout process. As in the previous question, the researcher grouped responses into logical/similar categories. For this question, examples were given to help the respondents understand the question. The examples given were "dollar value of the contract", "amount of canceling funds", and "resources required." The top answer (24%) was resources. This included facilities, budgets, information technology, and manpower. Resources are an issue that will surface quite often.

Table 14 Economic Factors

Economic Factor	Frequency	Percent
Resources	36	24%
Canceling funds	18	12%
Audits/Settlements/Rates	15	10%
Contract type/complexity	14	9%
Contract dollar value	12	8%
Availability/Replacement funds	10	7%
Unliquidated Balances	10	7%
Deobligations	5	3%
Financial data/Payment Tracking	5	3%
Time/Timeliness	5	3%
Multiple Appropriations/fund cites	3	2%
Contract Age	3	2%
Overruns/under-runs	2	1%
Interest Claims	2	1%
Contractor merger/Acquisition/Out of business	2	1%
Contractor cooperation	1	1%
Grouping/Sorting of Contracts	1	1%
Competing Priorities	1	1%
Excess property/material disposition	1	1%
Payment with-holds	1	1%
Progress Payments	1	1%
Security Certifications	1	1%
Teamwork	1	1%
Incentives	1	1%
Total	151	100%

[Source: Developed by researcher]

The resources response was followed by a grouping of factors that included canceling funds, audits/settlements/rates, and contract type/complexity.

Question 14 asked the respondent to identify any social factors that could impact the success of the contract closeout process. Table 15 shows the aggregate responses of social factors that the respondents thought could impact the contract closeout process. The researcher grouped responses into logical/similar categories. For this question, examples were given to help the respondents understand the question. The examples given were "workload assignment", "peer pressure", and "command visibility." The top two answers were related and included workload assignments and priorities. These were followed by reputation/not career enhancing and visibility/supervisory concern.

Table 15 Social Factors

Social Factor	Frequency	Percent
Workload Assignments	26	23%
Priorities	24	21%
Reputation/Not Career Enhancing	14	12%
Visibility/Supervisory concern	12	11%
Communication/Cooperation	6	5%
Lack of Support	6	5%
Resources	4	4%
Rigid Process/Culture	4	4%
Low Morale/lack of Respect	4	4%
Peer Pressure/Intimidation	3	3%
Political Pressure	2	2%
Skills/Knowledge	2	2%
Contractor Acquisition/Consolidation	1	1%
Duplication of Work	1	1%
Performance Metrics	1	1%
Guidance	1	1%
Responsibilities	1	1%
Personnel Turnover	1	1%
Impact on Program Manager/Contractor Relationship	1	1%
Total	114	100%

[Source: Developed by researcher]

Based on the data gathered and examined thus far, there are several input factors that may be of increased importance for a successful contract closeout process. These include system direction issues such as a command communicating the importance of the contract closeout process as well as behaving in a way that supports that communication. Another input is the fostering of identified key success factors such as maintaining organized and complete contract documents and files and teamwork and cooperation between the various agencies that are involved in the process. Additionally, environmental factors such as adequate resources, priorities, and workload assignments can impact the closeout process. It should be noted that there are instances where an item can show up in multiple areas of the model. For instance, a mandate from a higher command can be considered in system direction, however it may also fit in environment as external political pressure. Figure 6 highlights some of the key input elements of the model discussed in conjunction with the data collected in this section.

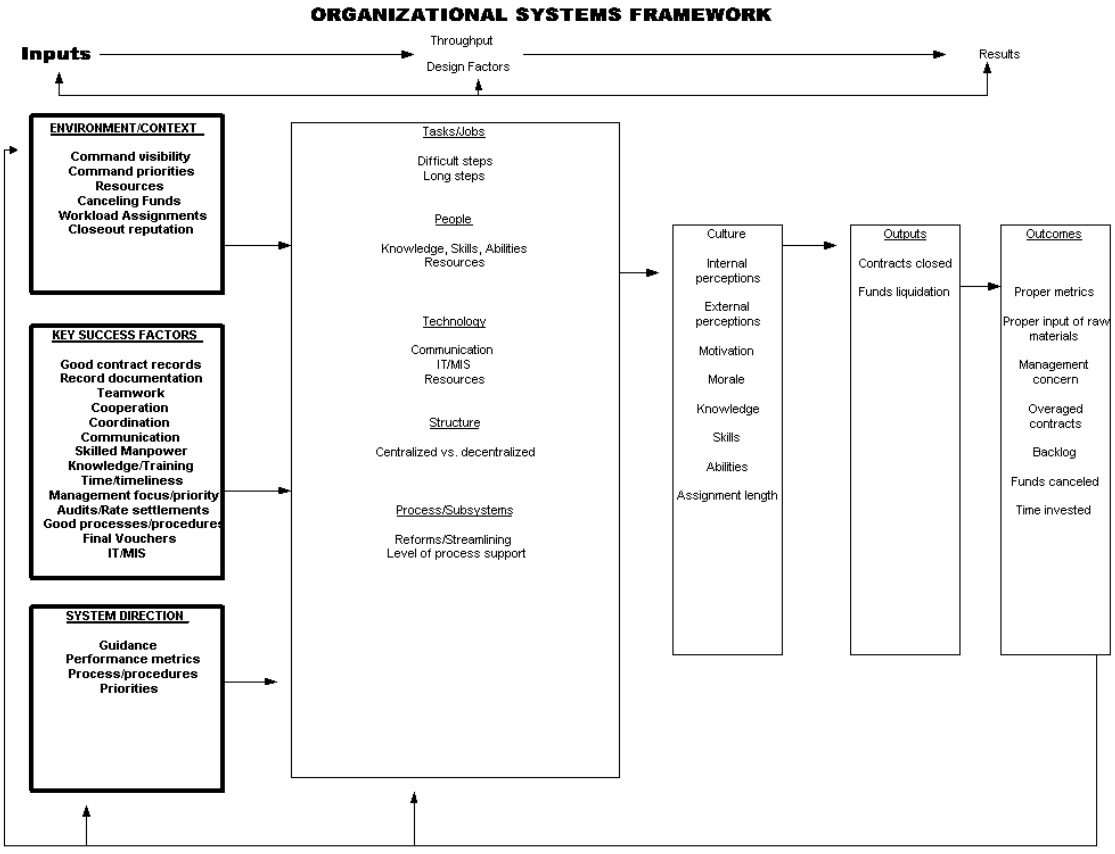

Figure 6. Input Model Summary
[Source: After [47] Adapted by researcher]

D. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL THROUGHPUTS

The next series of questions is concerned with areas that fall in the throughput section of the OSFM. This includes (1) tasks/jobs, (2) technology, (3) structure, (4) people, and (5) process/subsystems.

The first part Question 15 asked the respondent to identify which contract closeout steps are considered to be the most difficult based on the fifteen steps delineated in the FAR. Table 16 shows the ranking of the fifteen contract closeout steps from the FAR based on the degree of difficulty in completing them. The most difficult step cited was "Contract audit complete" (13%). This was followed closely by "Prior year indirect cost rates are settled" (12%), "Contractor's final invoice has been submitted" (11%), and "Contract funds review is completed and deobligation of any excess funds is recommended" (10%). There were 28% of the respondents who did not answer or fully answer the question. This may be due to the fact that many functional areas that support the contract closeout process may not be familiar with all of the steps. They may only be familiar with their particular piece of the process.

Table 16 Most Difficult Step

Most Difficult Step	Frequency	Percent
Contract audit is completed	41	13%
Prior year indirect cost rates are settled	36	12%
Contractor's final invoice has been submitted	35	11%
Contract funds review is completed and deobligation of any excess funds is recommended	30	10%
Subcontracts are settled by the prime contractor	23	8%
All interim or disallowed costs are settled	14	5%
Disposition of classified material is completed	13	4%
Property clearance is received	7	2%
Price revision is completed	7	2%
Contractor's closing statement is completed	7	2%
Final patent report is cleared	5	2%
There is no outstanding value engineering change proposal	1	0%
Termination docket is completed	1	0%
Final royalty report is cleared	0	0%
Plant clearance report is received	0	0%
No Answer	86	28%
Total	306	100%

[Source: Developed by researcher]

The second part of Question 15 asked the respondent to propose solutions that could possibly alleviate the difficulty of the steps highlighted. The next series of four tables addresses the proposed solutions to the four most difficult steps cited in Table 16. All of the tables show aggregate responses. The researcher grouped responses logically based on similarity of response.

The most difficult step noted was "Contract audit completed." Table 17 shows the aggregate of proposed solutions. Twenty-three percent recommended more personnel be made available to perform the audits. Twenty percent recommended teaming with DCAA. Fourteen percent thought DCAA just needed to work faster to get the audits done. Fourteen percent suggested better-defined audit processes with simplified ability to request waivers. Other suggestions included elevating the priority of audits with DCAA, increasing the use of quick-closeout procedures, empowering the contracting officer, and providing better training for DCAA personnel.

Table 17 Contract Audit Solutions

Solution	Frequency	Percent
More personnel	8	23%
Teaming with DCAA	7	20%
Timeliness	5	14%
Define when required/Authorize waiver	5	14%
Elevated priority	4	11%
Notify DCAA of new awards	2	6%
Process/quick-closeout	2	6%
Empower PCO	1	3%
Better training	1	3%
Total	35	100%

[Source: Developed by researcher]

The second most difficult step noted was "Prior year indirect cost rates are settled." Many of the proposed solutions are similar to those found in the previous table. Table 18 breaks out the aggregate of proposed solutions. Increasing DCAA personnel (19%) tops the list followed by utilizing quick-closeout procedures and improving DCAA efficiencies.

The third most difficult step noted was "Contractor's final invoice has been submitted." These results are provided in Table 19. The most prevalent proposed

solution was to increase contractor priority and responsiveness to this step (50%). This was followed by recommendations to increase the use of unilateral closeout or quick-closeout procedures by the Government. Other recommendations included incentivizing the contractor to submit the final voucher in a timely manner as well as a better system to track final vouchers and their status.

Table 18 Prior Year Indirect Cost Rates

Solution	Frequency	Percent
Increase personnel	4	19%
Quick-closeout procedures	3	14%
Improve DCAA efficiency	3	14%
DCMA/DCAA Teaming	2	10%
Risk Assessments	2	10%
Modify Process	1	5%
DCAA/Contractor teaming	1	5%
DCMA lack of focus	1	5%
Simplify Cost Accounting Standards (CAS)	1	5%
Multiple year auditing	1	5%
Unmotivated contractors	1	5%
Penalties	1	5%
Total	21	100%

[Source: Developed by researcher]

Table 19 Contractor's Final Invoice Has Been Submitted

Solution	Frequency	Percent
Increase contractor priority/responsiveness	13	50%
Unilateral Closeouts/quick-closeout	5	19%
Increase withhold to larger amount/better incentives	2	8%
Better tracking and control of vouchers/records	2	8%
Teaming/Cooperation	2	8%
Impact Contractor Past Performance rating	1	4%
Increase DFAS efficiency	1	4%
Total	26	100%

[Source: Developed by researcher]

The fourth most difficult step noted was "Contract funds review is completed and deobligation of any excess funds is recommended." These results are provided in Table 20. The most prevalent proposed solution (22%) was to increase coordination with DFAS. This was followed by recommendations to increase the use of teaming for difficult or complex contracts (15%) and improving information technology systems and

support (15%). Other recommendations included generally increasing communication among the personnel involved in closeout, better utilization of the ACOs, and starting this step much earlier in the overall contract life-cycle.

Table 20 Contract Funds Review Is Completed

Solution	Frequency	Percent
Increased coordination with DFAS	6	22%
Teaming for difficult contracts	4	15%
Better IT support	4	15%
Increased communication	3	11%
Better utilization of ACOs	3	11%
Start process earlier	3	11%
Better process feedback	1	4%
Training	1	4%
Relax funding restrictions for closeouts	1	4%
More personnel	1	4%
Total	27	100%

[Source: Developed by researcher]

Question 16 asked the respondent to select the three steps that take the longest to complete. Once again this was based on the 15 general steps delineated in the FAR. Table 21 shows the ranking of the 15 closeout steps from the FAR based on the length of time required for completion according to the respondents. The top answer (13%), "Contract audit is completed", is also the step that was considered to be the most difficult. This was followed by " Prior year indirect cost rates are settled" (10%). It is interesting to note that both of these steps have intensive inputs from DCAA personnel. This question had 40% of the respondents either not answer or not fully answer the question. As in the previous question, it is believed that this was due to some respondents, particularly those not in the contracting field, not being familiar enough with the process to answer the question.

The second part of Question 16 asked the respondent to propose solutions that could possibly alleviate the time problem associated with the steps highlighted. The next series of four tables addresses the proposed solutions to the four most time consuming steps cited in Table 21. All of the tables show aggregate responses. The researcher grouped responses logically based on similarity of response.

Table 21 Longest Step

Longest Step	Frequency	Percent
Contract audit is completed	39	13%
Prior year indirect cost rates are settled	31	10%
Contractor's final invoice has been submitted	26	8%
Contract funds review is completed and deobligation of any excess funds is recommended	21	7%
Subcontracts are settled by the prime contractor	15	5%
All interim or disallowed costs are settled	14	5%
Disposition of classified material is completed	12	4%
Final patent report is cleared	7	2%
Property clearance is received	6	2%
Termination docket is completed	4	1%
Contractor's closing statement is completed	4	1%
Final royalty report is cleared	3	1%
Price revision is completed	2	1%
Plant clearance report is received	1	0%
There is no outstanding value engineering change proposal	0	0%
No Answer	121	40%
Total	306	100%

[Source: Developed by researcher]

The most time consuming step noted was "Contract audit completed." Table 22 shows the aggregate of proposed solutions. Fifty-eight percent recommended that DCAA provide more personnel to dedicate to the completion of audits. Seventeen percent recommended that DCAA make the completion of audits more of a priority. Other suggestions included ensuring there are sufficient data and records to complete the step, tracking the status of audits already requested, and ensuring that DCAA is notified of all new awards. Many of these same solutions were mentioned as a result of Question 15 and the difficulty of ensuring that audits are completed.

The second most time consuming step noted was "Prior year indirect cost rates are settled." Table 23 shows the aggregate of proposed solutions. Forty-five percent recommended that additional manpower be made available. Eighteen percent

recommended that DCAA make the completion of audits more of a priority and steps be taken to increase responsiveness and cooperation by the contractor. Other suggestions included streamlining the process and utilizing quick-closeout procedures.

Table 22 Contract Audit Is Completed (Time)

Solution	Frequency	Percent
DCAA manpower	7	58%
DCAA Priority	2	17%
Insufficient data	1	8%
Tracking/status of requested audits	1	8%
Inform DCAA of new awards	1	8%
Total	12	100%

[Source: Developed by researcher]

Table 23 Prior Year Indirect Cost Rates Are Settled (Time)

Solution	Frequency	Percent
Manpower	5	45%
Priorities	2	18%
Contractor responsiveness/cooperation	2	18%
Streamline process	1	9%
Quick-Closeout	1	9%
Total	11	100%

[Source: Developed by researcher

The third most time consuming step noted was "Contractor's final invoice has been submitted." These proposed solutions are provided in Table 24. The most prevalent proposed solution was to increase contractor priority and responsiveness to this step (50%). This was followed by recommendations to ensure a higher quality of documentation is made available. Other recommendations included additional training as well as starting the process sooner in the contract lifecycle.

Table 24 Contractor's Final Invoice Has Been Submitted (Time)

Solution	Frequency	Percent
Contractor responsiveness/priority	6	50%
Better documentation	4	33%
Training	1	8%
Start process sooner	1	8%
Total	12	100%

[Source: Developed by researcher

The fourth most time consuming step noted was "Contract funds review is completed and deobligation of any excess funds is recommended." These proposed solutions are provided in Table 25. There was no solution for this question that was cited more than any other. Each answer appeared only once. These included updating the process, decreasing the contract backlog, increasing the priority with DFAS, improving data quality and availability, relaxing funding/appropriation restrictions for closeouts, and providing additional manpower.

Table 25 Contract Funds Review Has Been Completed (Time)

Solution	Frequency	Percent
Update process	1	17%
Decrease backlog	1	17%
DFAS Priority	1	17%
Improve data	1	17%
Relax funding restrictions	1	17%
Manpower	1	17%
Total	6	100%

[Source: Developed by researcher

Question 17 asked the respondent if contract closeout activities were provided with the appropriate resources. This question also asked respondents to name the resources that may be lacking. Table 26 breaks out the responses concerning the adequacy of resources made available for contract closeout activities. The majority of respondents (64%) thought that adequate resources were not being made available for contract closeout. Only 27% thought that adequate resources were being provided. This is interesting when compared to the answers to Question 13 that cited resources as a potential impact on the closeout process from an input perspective.

Table 26 Appropriate Resources

Response	Frequency	Percent
Yes	28	27%
No	65	64%
No Answer	9	9%
Total	102	100%

[Source: Developed by researcher]

The second part of Question 17 asked the respondent to cite what resources in particular were lacking. Examples were given which included manpower, storage facilities, and information technology. Table 27 shows the aggregate breakout of the responses. The researcher grouped the responses logically based on similarity. The resource most noted as lacking (55%) was manpower. This was followed by information technology (12%) and storage facilities (11%). Other resources noted included plans/procedures/process, corporate/management commitment/priority, time, and authority.

Table 27 Resources Lacking

Response	Frequency	Percent
Manpower	54	55%
Information Technology	12	12%
Storage facilities	11	11%
Plans/procedures/process	8	8%
Corporate/Management commitment/priority	6	6%
Time	4	4%
Authority	3	3%
Total	98	100%

[Source: Developed by researcher]

Question 18 asked the respondent to rate the level of knowledge, skills, and abilities (KSAs) of personnel involved in the contract closeout process. Table 28 breaks out the responses concerning the level of KSAs of personnel in the contract closeout process. Only 4% of the respondents thought that personnel involved in the process did not have appropriate KSAs to complete their tasks. On the other hand, 8% thought that personnel always had the appropriate KSAs to complete their tasks. The bulk of the responses (79%) thought that personnel had appropriate KSAs in the "Somewhat" through "Frequently" range.

Questions 19 through 25 are part of a series of questions designed to rate the level of support that various organizations or groups of people provide to the contract closeout process.

Question 19 asked the respondent to rate the level of support provided by security personnel. Table 29 shows the breakout of responses ranking the level of support from

security personnel. Responses are almost evenly distributed across the potential choices. The single highest response (19%) was that security personnel did not sufficiently support the contract closeout process.

Table 28 Appropriate Knowledge, Skills, And Abilities

Response	Frequency	Percent
Not Applicable	2	2%
No	4	4%
Somewhat	20	20%
Moderately	23	23%
Frequently	37	36%
Always	8	8%
No Answer	8	8%
Total	102	100%

[Source: Developed by researcher]

Table 29 Security Support

Response	Frequency	Percent
Not Applicable	14	14%
No	19	19%
Somewhat	16	16%
Moderately	18	18%
Frequently	14	14%
Always	11	11%
No Answer	10	10%
Total	102	100%

[Source: Developed by researcher]

Question 20 asked the respondent to rate the level of support provided by legal personnel. Table 30 shows the respondent breakout concerning the level of support from legal personnel. The single highest response (31%) was that legal personnel frequently support the contract closeout process sufficiently. Only 7% of the respondents thought that legal personnel did not provide sufficient support. Twenty-nine percent rated legal support in the "somewhat" to "moderately" sufficient range. "Not applicable" or no answer provided accounted for 27% of the responses.

Question 21 asked the respondent to rate the level of support provided by finance personnel. Table 31 shows the response breakout concerning the level of support from

finance personnel. The two highest responses (21% each) were that finance personnel either moderately or always supported the contract closeout process sufficiently. Only 10% of the respondents thought that finance personnel did not provide sufficient support. 16% either did not answer the question or chose "Not Applicable".

Table 30 Legal Support

Response	Frequency	Percent
Not Applicable	18	18%
No	7	7%
Somewhat	11	11%
Moderately	18	18%
Frequently	32	31%
Always	7	7%
No Answer	9	9%
Total	102	100%

[Source: Developed by researcher]

Table 31 Finance Support

Response	Frequency	Percent
Not Applicable	6	6%
No	10	10%
Somewhat	14	14%
Moderately	21	21%
Frequently	20	20%
Always	21	21%
No Answer	10	10%
Total	102	100%

[Source: Developed by researcher]

Question 22 asked the respondent to rate the level of support provided by contracts personnel. Table 32 shows the response breakout concerning the level of support from contracts personnel. The single highest response (27%) was that contracts personnel frequently support the contract closeout process sufficiently. Only 7% of the respondents thought that contracts personnel did not provide sufficient support. Thirteen percent either did not answer the question or chose "Not Applicable".

Question 23 asked the respondent to rate the level of support provided by DCMA personnel. Table 33 shows the response breakout concerning the level of support from

DCMA personnel. The two highest responses (24% each) were that DCMA personnel either moderately or frequently supported the contract closeout process sufficiently. Only 5% of the respondents thought that DCMA personnel did not provide sufficient support. Additionally, 22% either did not answer the question or chose "Not Applicable".

Table 32 Contracts Support

Response	Frequency	Percent
Not Applicable	5	5%
No	7	7%
Somewhat	23	23%
Moderately	21	21%
Frequently	28	27%
Always	10	10%
No Answer	8	8%
Total	102	100%

[Source: Developed by researcher]

Table 33 Defense Contract Management Agency Support

Response	Frequency	Percent
Not Applicable	10	10%
No	5	5%
Somewhat	16	16%
Moderately	24	24%
Frequently	24	24%
Always	11	11%
No Answer	12	12%
Total	102	100%

[Source: Developed by researcher]

Question 24 asks the respondent to rate the level of support provided by DCAA personnel. Table 34 shows the response breakout concerning the level of support from DCAA personnel. The single highest response (26%) was that DCAA personnel frequently support the contract closeout process sufficiently. Fourteen percent of the respondents thought that DCAA personnel did not provide sufficient support. Additionally, 19% either did not answer the question or chose "Not Applicable". These answers can be compared to the answers from Questions 15 and 16 in light of the fact

that many of the difficult and longest steps in the contract closeout process seem to have DCAA personnel involved.

Table 34 Defense Contract Audit Agency Support

Response	Frequency	Percent
Not Applicable	7	7%
No	14	14%
Somewhat	14	14%
Moderately	25	25%
Frequently	27	26%
Always	3	3%
No Answer	12	12%
Total	102	100%

[Source: Developed by researcher]

Question 25 asked the respondent to rate the level of support provided by contractor personnel. Table 35 shows the response breakout concerning the level of support from contractor personnel. The single highest response (24%) was that contractor personnel moderately support the contract closeout process sufficiently. Only 12% of the respondents thought that contractor personnel did not provide sufficient support. Additionally, 19% either did not answer the question or chose "Not Applicable." The overall trend appears to indicate less sufficient support from the contractor when compared to the sufficiency of support provided by Government personnel.

Table 35 Contractor Support

Response	Frequency	Percent
Not Applicable	8	8%
No	12	12%
Somewhat	20	20%
Moderately	24	24%
Frequently	21	21%
Always	6	6%
No Answer	11	11%
Total	102	100%

[Source: Developed by researcher]

Question 26 asked the respondent to rate the level of management concern with regards to the contract closeout process. Table 36 shows the response breakout concerning the level of concern from management personnel. The single highest response (24%) was that management personnel frequently support the contract closeout process sufficiently. However, 22% of the respondents thought that management personnel did not provide sufficient support. Additionally, 11% either did not answer the question or chose "Not Applicable". This is certainly a higher proportion of respondents that thought insufficient support was being provided by management when compared to the other functions/organizations. This will be further analyzed in conjunction with the results of Questions 9 and 11.

Table 36 Management Concern

Response	Frequency	Percent
Not Applicable	2	2%
No	22	22%
Somewhat	18	18%
Moderately	19	19%
Frequently	24	24%
Always	8	8%
No Answer	9	9%
Total	102	100%

[Source: Developed by researcher]

Question 27 asked the respondent to provide their recommendation concerning the best structure to support the contract closeout process. Table 37 shows the response breakout as to whether they believe that the contract closeout process would be better served as a centralized or decentralized function. A centralized function would have a separate and distinct unit or branch that would handle all of the organization's contract closeout requirements. A decentralized function would have the buying or awarding Contracting Officer ultimately responsible for closing out those contracts they award. The majority (64%) of the respondents thought that contract closeout should be a centralized function. Only 30% thought that it should be a decentralized function.

The second part of Question 27 asked the respondent to provide comments regarding their recommended contract closeout structure. These data are provided in Tables 38 and 39. Both tables include aggregate responses that the researcher has logically grouped based on similarity of the response.

Table 38 shows the aggregate responses for reasons to adopt a centralized contract closeout structure. The two most prevalent reasons cited were that it is not a pre-award priority (25%) and that there were benefits to be derived from consolidation/economies of scale. These were followed by dedicated/focused support and specialization/training at 13% each. Other reasons cited include standardization of the process and increased control.

Table 37 Closeout Structure

Response	Frequency	Percent
Centralized	65	64%
Decentralized	31	30%
No Answer	6	6%
Total	102	100%

[Source: Developed by researcher]

Table 38 Reasons To Centralize

Reason	Frequency	Percent
Not a pre-award priority	17	25%
Consolidation/economies of scale	16	24%
Dedicated/focused support	9	13%
Specialization/training	9	13%
Standardization of process	4	6%
Control	4	6%
One closeout face to industry	3	4%
Unique/important function	3	4%
Centralized data	1	1%
Decreased conflict	1	1%
Total	67	100%

[Source: Developed by researcher]

Table 39 shows the aggregate responses for reasons to adopt a decentralized contract closeout structure. The two most prevalent reasons cited were that the pre-award personnel have greater familiarity with the contractor/contract (43%) and that the pre-

award personnel would be more accountable for the contracts that they award (24%). This was followed by the ability to provide the customer "cradle-to-grave" support. Other reasons cited include providing variety of work and allowing better control of manpower resources.

Table 39 Reasons To Decentralize

Reason	Frequency	Percent
Greater familiarity with contractor/contract	16	43%
PCO held more accountable for contracts awarded	9	24%
Cradle to grave support	5	14%
Variety of work	3	8%
Better control of resources	2	5%
Delegate to ACO	1	3%
Monitor contractor performance	1	3%
Total	37	100%

[Source: Developed by researcher]

Questions 28, 29, and 30 are concerned with the communications between functional areas and organizations in the contract closeout process.

Specifically, Question 28 asked the respondent to rate various means of communication based on level of problems encountered. Table 40 shows the response breakout of problematic methods of communication encountered. The lower the average, the less problematic the communication means was. The higher the average, the more problematic the communication means was. The most problematic communication means cited was the use of "US Mail". The assumption here is that US Mail is being used for written forms of communication. The least problematic means of communication cited was the "meeting".

Table 40 Problematic Communications

Communication Type	Average Score
Email	2.59
Fax	3.01
Meeting	2.48
Phone	2.72
US Mail	3.80

[Source: Developed by researcher]

Question 29 asked the respondent to rate the same communication means based on their personal preference. Table 41 shows the response breakout as to which of the given methods of communication are most preferred. The lower the average, the less preferred the communication means was. The higher the average, the more preferred the communication means was. The most preferred communication means cited was the use of "Email". The least preferred means of communication cited was the "US Mail".

Table 41 Preferred Communications

Communication Type	Average Score
Email	3.15
Fax	2.96
Meeting	3.05
Phone	3.12
US Mail	2.75

[Source: Developed by researcher]

Question 30 asked the respondent to rate these same means of communication based on how effective they thought they were. Table 42 shows the response breakout of how effective each communication means was. The lower the average, the less effective the communication means was. The higher the average, the more effective the communication means was. The most effective communication means cited was the use of "Email". The least effective means of communication cited was the "US Mail". It is interesting to note that "US Mail" was the most problematic form of communication as well as considered the least effective.

Table 42 Effective Communications

Communication Type	Average Score
Email	3.34
Fax	3.03
Meeting	3.05
Phone	3.10
US Mail	2.76

[Source: Developed by researcher]

The first part of Question 31 asked the respondent if they had seen evidence of any acquisition reforms or streamlining efforts in the contract closeout process. Table 43 shows the breakout of responses pertaining to evidence of acquisition reforms or streamlining in the contract closeout process. Sixty-two percent of the respondents saw no evidence of acquisition reform or streamlining. Only 32% of the respondents had seen evidence of reforms or streamlining.

Table 43 Acquisition Reforms/Streamlining

Response	Frequency	Percent
Yes	33	32%
No	63	62%
No Answer	6	6%
Total	102	100%

[Source: Developed by researcher]

The second part of Question 31 asked for examples of acquisition reforms that the respondent observed being used. These are shown in Table 44. The most prevalent reform noted was the use of quick-closeout procedures (34%). This was followed by unilateral rate settlements and use of the Cumulative Allowable Cost Worksheet at 11% each.

Table 44 Reforms/Streamlining

Response	Frequency	Percent
Quick-closeout procedures	15	34%
Unilateral rate settlement	5	11%
DCAA Cumulative Allowable Cost Worksheet (CACW)	5	11%
Redesigning/standardizing Forms	4	9%
Audit Waivers/Risk assessments	4	9%
Re-evaluating processes	2	5%
Increased use of electronic communication	2	5%
Preparing Contractor paperwork for the contractor	1	2%
Improved information technology	1	2%
Closing orders	1	2%
DCMA waiver for unlimited use of early closure rates	1	2%
OMB Circular A-133	1	2%
Increased ACO delegations	1	2%
Payment Instructions	1	2%
Total	44	100%

[Source: Developed by researcher]

Other responses noted include the redesign/standardization of forms and audit waiver/risk assessments at 9% each.

Based on the data gathered and examined in this section, there are several throughput factors that may be of increased importance for a successful contract closeout process. These include task/job issues such as identifying steps of the process that are more difficult or time consuming than others. Technology issues include sufficiency of resources and means of communication. Structure of the organization (centralized vs. decentralized contract closeout) can be an important factor. People issues include ensuring that all personnel have the requisite knowledge, skills, and abilities to conduct their work. Finally, process/subsystem issues may include the level of support the process gets from upper management as well as the implementation of reforms and streamlining initiatives. These factors are represented in the throughput section of Figure 7.

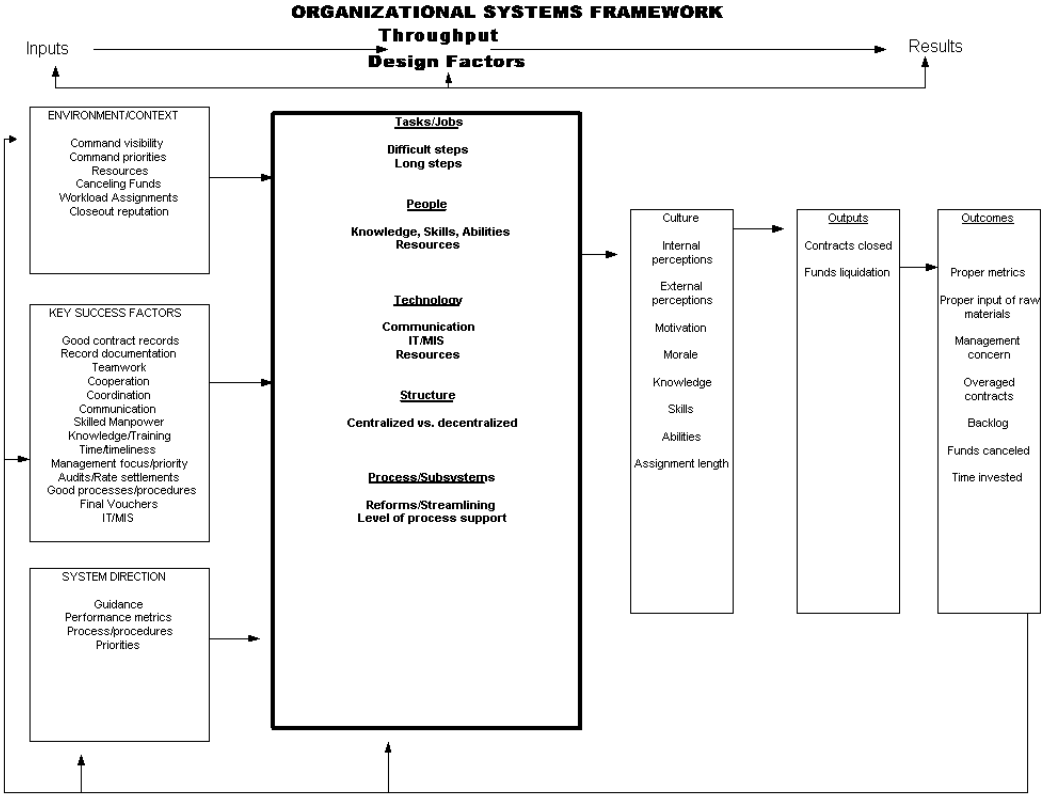

Figure 7. Throughput Model Summary
[Source: After [47] Adapted by researcher]

In the next section the data relating to the results section of the OSFM is presented.

E. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL RESULTS

This series of questions and associated collected data are concerned with areas that fall in the Results section of the OSFM. This includes culture, outputs, and outcomes.

Question 32 asked the respondent how they measure the productivity of the contract closeout process. The question itself was open to much interpretation by the respondent and as such the data were unusable.

Question 33 asked the respondent to identify four effective metrics or measures that are important to the contract closeout process. Table 45 shows the aggregate of effective metrics respondents think should be most important to the contract closeout process. These data were logically grouped by the researcher based on similarity of the responses. These data only reflect the responses that were reported more than once. By far the two most often cited metrics were the time necessary to close a contract after it becomes physically complete and the number of contracts closed per some given time period. These are two good metrics that can give an indication of the efficiency and effectiveness of a measured closeout process. Of the expected 408 responses, only 168 were received. Many respondents incompletely completed the answer or did not answer at all. Several respondents noted that they did not have the experience to answer the question. One would expect the higher grades and supervisory personnel to have more input into this question since these are the levels that may use and be responsible for certain metrics in the completion of their normal job duties.

Questions (34-40) targeted only those personnel who had experience working with or in a centralized contract closeout activity. Initial review of the data collected indicates that forty-five respondents fall into that category.

Question 34 asked if contracts that are physically complete arrive to contract closeout personnel in a timely manner.

Table 45 Effective Metrics

Metric	Frequency	Percent
Time necessary to close from when physically complete	31	18%
Number of Contracts Closed	27	16%
Number of contracts physically complete but not yet closed	7	4%
Amount of Canceling Funds	6	4%
Dollar value of contracts awaiting closeout	6	4%
Dollar value of contracts closed	6	4%
Number of hours required per contract closed	6	4%
Number of Overaged Actions	6	4%
Amount of dollars deobligated	5	3%
Number of overaged contracts closed	4	2%
Time required from Audit Request to receipt of audit	4	2%
Amount of funds expired	3	2%
Amount of funds expiring	3	2%
Amount of funds that have canceled	3	2%
Number of personnel closing contracts	3	2%
Percentage of contracts physically complete but not yet closed	3	2%
Types of contracts physically complete but not yet closed	3	2%
Amount of funds remaining on contracts awaiting closure	2	1%
Amount of time spent in CAR section 2	2	1%
Number of contracts closed that were not overage	2	1%
Number of contracts eligible for closure via quick-closeout procedures	2	1%
Number of contracts not physically complete	2	1%
Number of outstanding audit requests	2	1%
Percentage of overaged contracts	2	1%
Time required from receipt of final voucher to payment of final voucher	2	1%
Type of contracts closed	2	1%
Cost to close per contract	2	1%
Amount of canceling funds liquidated	2	1%
Total	168	100%

[Source: Developed by researcher]

Table 46 gives the breakout of responses concerning the timely arrival of physically complete contracts to the centralized closeout activity. The majority (31%) of the respondents thought that the physically complete contracts were not getting to the centralized closeout activity in a timely manner. Only 4% of the respondents thought the contracts were frequently arriving in a timely manner.

Table 46 Timely Arrival Of Contracts

Response	Frequency	Percent
Not Applicable/No Answer	10	22%
No	14	31%
Somewhat	12	27%
Moderately	7	16%
Frequently	2	4%
Total	45	100%

[Source: Developed by researcher]

Question 35 asked the respondent if contract closeout was receiving the proper level of management concern from the contracts directorate staff. Table 47 gives the breakout of responses concerning the sufficient level of management concern from the contracts directorate staff. The majority (36%) of the respondents thought that the contracts directorate staff was not sufficiently concerned about the contract closeout process. Only 47% of the respondents thought that management concern was at the level of "Somewhat" to "Frequently" sufficient.

Table 47 Contract Management Concern

Response	Frequency	Percent
Not Applicable/No Answer	8	18%
No	16	36%
Somewhat	5	11%
Moderately	7	16%
Frequently	9	20%
Total	45	100%

[Source: Developed by researcher]

Question 36 asked the respondent if contract closeout had the proper level of management concern by the overall organization's management staff. Table 48 gives the

breakout of responses concerning the perceived level of management concern by the overall organizational management staff. The majority (31%) of the respondents thought that the organization's management was not sufficiently concerned about the contract closeout process. Only 49% of the respondents thought that management concern was at the level of "Somewhat" to "Frequently" sufficient.

Table 48 Overall Management Concern

Response	Frequency	Percent
Not Applicable/No Answer	9	20%
No	14	31%
Somewhat	9	20%
Moderately	6	13%
Frequently	7	16%
Total	45	100%

[Source: Developed by researcher]

Question 37 asked respondents to rate the level of morale of contract closeout personnel as compared to those personnel not working in contract closeout. Table 49 gives the breakout of responses concerning the perceived level of morale of centralized contract closeout personnel when compared to other personnel. The majority (51%) of the respondents thought that the closeout personnel had morale that was lower than the morale of other personnel. Only 20% of the respondents thought that the morale was the same. Only 11% thought that the morale was higher. Seventeen percent answered that it was "Not Applicable" or "Do Not Know".

Table 49 Morale

Response	Frequency	Percent
Not Applicable/No Answer	2	4%
Do Not Know	6	13%
Lower	23	51%
Same	9	20%
Higher	5	11%
Total	45	100%

[Source: Developed by researcher]

Question 38 asked respondents to rate the level of motivation of contract closeout personnel as compared to those personnel not working in contract closeout. Table 50 gives the breakout of responses concerning perceived levels of motivation of centralized contract closeout personnel when compared to other personnel. The majority (38%) of the respondents thought that the closeout personnel had lower motivation than other personnel. Only 20% of the respondents thought that the level of motivation was the same. Twenty-seven percent thought that the level of motivation was higher. Only 15% answered that it was "Not Applicable" or "Do Not Know".

Table 50 Motivation

Response	Frequency	Percent
Not Applicable/No Answer	2	4%
Do Not Know	5	11%
Lower	17	38%
Same	9	20%
Higher	12	27%
Total	45	100%

[Source: Developed by researcher]

Question 39 asked respondents to rate the level of knowledge, skills, and abilities (KSAs) of contract closeout personnel as compared to those personnel not working in contract closeout. Table 51 gives the breakout of responses concerning the perceived level of KSAs of centralized contract closeout personnel when compared to other personnel. The majority (36%) of the respondents thought that the closeout personnel had the same level of KSAs when compared to other personnel.

Table 51 Knowledge, Skills, And Abilities

Response	Frequency	Percent
Not Applicable	1	2%
Do Not Know	4	9%
Lower	10	22%
Same	16	36%
Higher	14	31%
Total	45	100%

[Source: Developed by researcher]

Twenty-two percent of the respondents thought that the level of KSAs was lower. Thirty-one percent thought that the level of KSAs was higher. Only 11% answered that it was "Not Applicable" or "Do Not Know".

Question 40 asked the respondent to select the most effective length of assignment to contract closeout. Table 52 breaks out the responses concerning effective lengths of assignment to a centralized contract closeout branch. The majority of respondents (27%) thought that 19-24 months would be an optimal length of time to remain in a closeout branch. Only 13% thought that such an assignment should be permanent. Additionally, 7% thought that such an assignment should be six months or less.

Table 52 Rotation Assignment Length

Response	Frequency	Percent
0-6 Months	3	7%
7-12 Months	7	16%
13-18 Months	11	24%
19-24 Months	12	27%
24+ Months	4	9%
Permanent Assignment	6	13%
No Answer	2	4%
Total	45	100%

[Source: Developed by researcher]

Based on the data gathered and examined in this section, there are several results factors that may be of increased importance for a successful contract closeout process. These include cultural issues such as motivation, morale, and general perceptions of personnel working in the contract closeout process. For outcomes, the types of metrics gathered and used can be important to the process. In the next section the results portion OSFM will be summarized. Figure 8 represents the OSFM results elements.

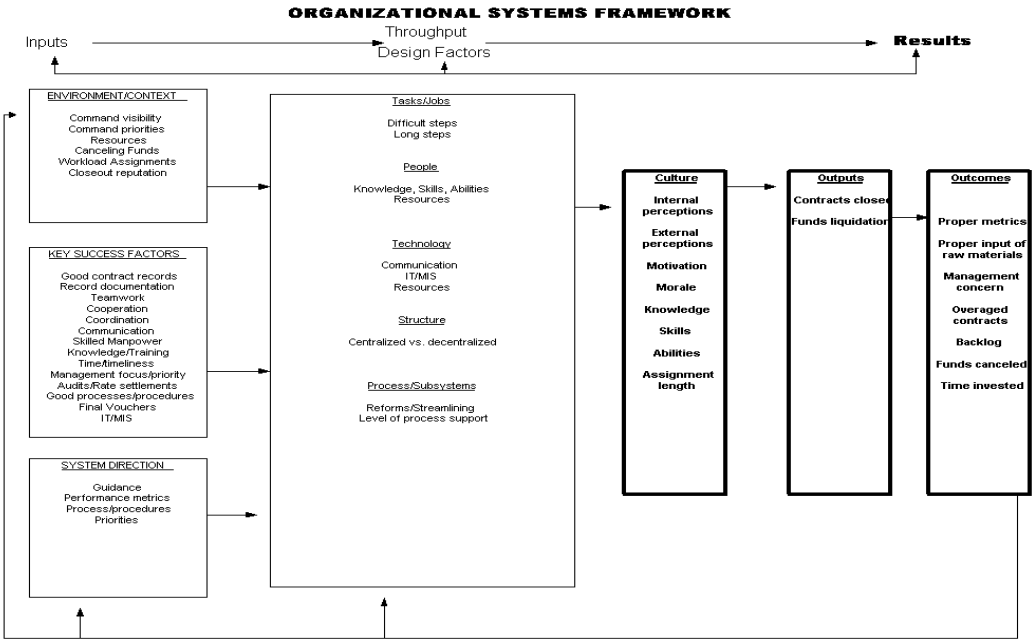

Figure 8. Result Model Summary
[Source: From [47]]

F. ORGANIZATIONAL SYSTEMS FRAMEWORK MODEL SUMMARY

Figure 9 presents all the inputs, throughput, and results of the OSFM discussed in this chapter. It should be noted that under inputs, environment/context factors currently include command visibility, command priorities, resources, canceling funds, workload assignments, and closeout reputation. Key success factors include good contract records, record documentation, teamwork, cooperation, coordination, communication, skilled manpower, knowledge/training, time/timeliness, management focus/priority, audits/rate settlements, good processes/procedures, final vouchers, and IT/MIS. System direction currently includes guidance, performance metrics, process/procedures, and priorities.

Under throughput, tasks/jobs includes difficult and long steps. People include knowledge, skills, abilities, and resources. Technology includes communication, IT/MIS, and resources. Structure includes centralization or decentralization. Process/subsystems include reforms/streamlining and level of process support.

Under results, culture includes internal and external perceptions, motivation, morale, knowledge, skills, abilities, and assignment length. Outputs include contracts closed and funds liquidated. Outcomes include proper metrics, proper input of raw

materials, management concern, overaged contracts, backlogs, funds canceled, and time invested.

G. DATA PRESENTATION SUMMARY

The survey data have been presented in this chapter in table format consistent with the survey instrument and the OSFM. Indepth analysis to include trends, correlations, and supporting analysis will be presented in the following chapter.

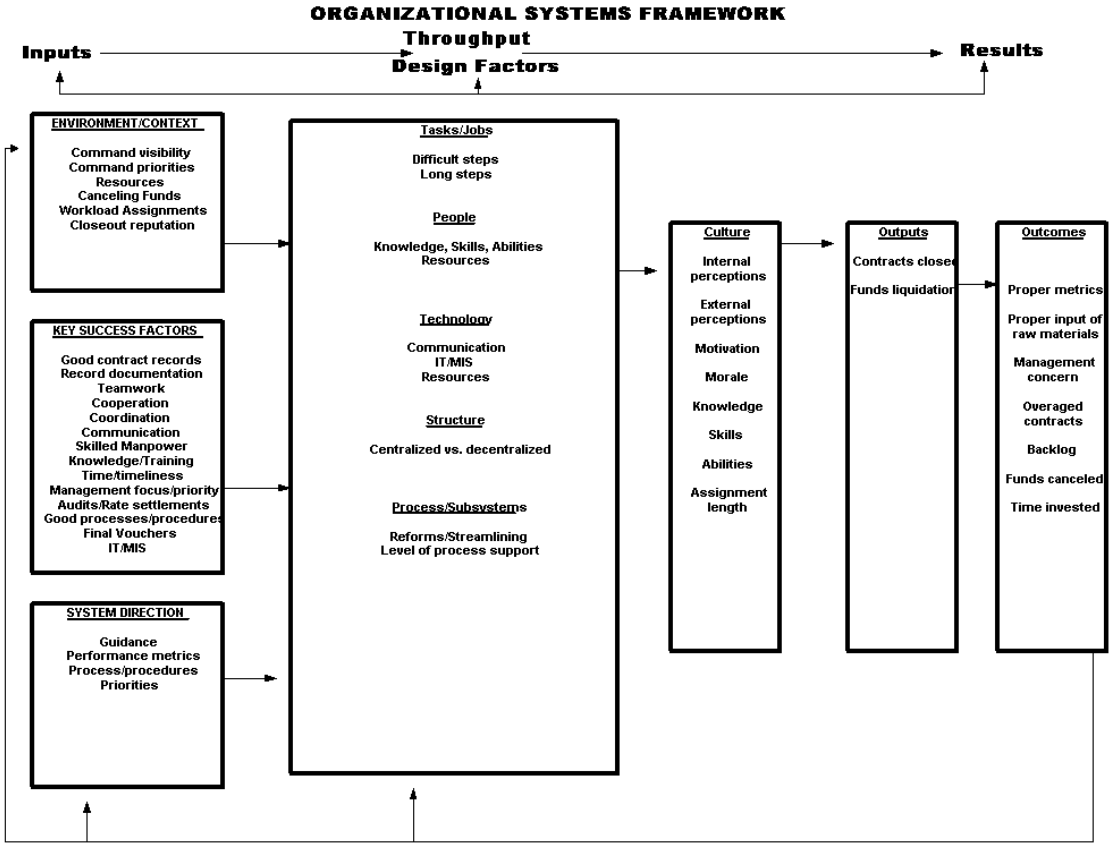

Figure 9. Total Model Summary

[Source: After [47] Adapted by researcher]

V. DATA ANALYSIS

A. INTRODUCTION

In this chapter the data presented in Chapter IV was analyzed. Each of the following sections, in addition to specific data analysis, covers any evolutionary changes in the OSFM constructed in the previous chapter. In Section B, demographic data will be analyzed. In Section C, input data will be analyzed. In Section D, throughput data will be analyzed. In Section E, results data will be analyzed. Section F contains the chapter summary.

B. DEMOGRAPHIC DATA ANALYSIS

In this section we will further analyze the demographic data collected in order to identify trends. Selected data that provide further insight into the contract closeout process will be discussed.

One of the questions that arises when examining the demographic data would concern any correlation between the functional area and years of acquisition experience. What these data show is that there is greater breadth of acquisition experience possessed by contracts personnel. Contracts personnel can be found throughout the experience continuum, whereas most other functional areas represented have personnel mainly at the higher levels. This may indicate that the contracting field is better positioning personnel for further development as future leaders. As senior contracts personnel retire, there would be a qualified pool of others readily available. Figure 10 shows how this may have greater importance in the future. This figure shows how the age distribution of DoD civilians has shifted to the right over time. As a higher percentage of personnel draw closer to retirement age, the Government faces the risk of losing corporate knowledge and proven leaders in large numbers. Having a balanced and age-distributed workforce may be a key to future success.

A second question of interest concerns the level of contract closeout expertise when compared to level of acquisition experience. Most of the respondents with five or fewer years of experience reported moderate or lower expertise with the contract closeout

function. As the years of acquisition experience increase so generally does the level of expertise with the contract closeout process. One could infer that most personnel involved in the acquisition process are getting some exposure to the contract closeout function and that it does not take too long to gain some moderate level of expertise in contract closeout.

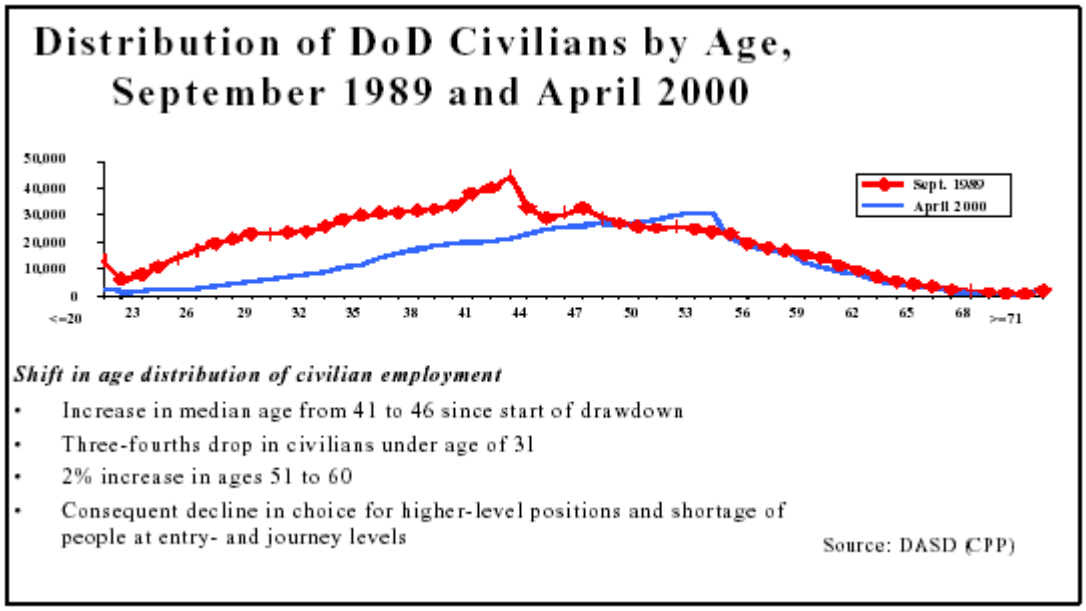

Figure 10. DoD Civilian Age

[Source: From [14:p. 1]]

Taking this one step further we can compare the years of contract closeout experience with the level of contract closeout expertise. It appears that as contract closeout experience increases so does the level of expertise.

When education level is examined, one can see that the majority (81%) of respondents have at least a college degree. Since most of the respondents were in the contracting field it seems that the requirements for that field, as addressed by DAWIA, could be responsible for personnel completing undergraduate degrees and eventually seeking higher level degrees. DAWIA certification standards note that a baccalaureate degree is required (with few exceptions) for certification at Level I. Graduate level studies in business or procurement are desired for the Level II certification while a Masters degree in business administration or procurement is desired for the Level III certification. Being competitively selected for promotion opportunities may mean that

obtaining the higher education level and associated certification level may be an important discriminator.

Sixty-two percent of the respondents had achieved some level of DAWIA certification. It should be noted that many, but not all career fields have corresponding DAWIA certification levels. Pertinent Career fields that have DAWIA certification standards include: Acquisition Logistics, Auditing, Business Cost Estimating and Financial Management, Contracting, Industrial/Contract Property Management, and Program Management. Security and accounting (DFAS) personnel do not have specific, applicable DAWIA certifications.

C. INPUT DATA ANALYSIS

In this section, data that relate to the inputs of the OSFM are further analyzed. This section of the model is concerned with: (1) environment/context, (2) key success factors, and (3) system direction.

1. Environment/Context

Environment/context can be further subdivided into: (1) political, (2) economic, (3) social, and (4) technological areas. These areas are analyzed within the context of being external to the system or process being studied.

a. Political

There were no specific questions asked or data gathered that directly addressed political concerns. The researcher felt that external political influences would not necessarily be readily identified by the level of personnel involved in the contract closeout process. As mentioned in Chapter II, there is growing political pressure to fix the pathologies associated with the contract closeout process. These pressures are often felt as a result of the many audits, reviews, and inspections that examine the contract closeout process.

b. Economic

Economic influences were noted in many of the question responses. Just in considering the demographic data it would appear that personnel may be getting adequate funding for training and education. There are fairly high percentages of respondents who have obtained higher levels of education and DAWIA certification.

This requires the availability of funding, not only for tuition, but also for travel in many cases. This was supported by the data that found 69% of the respondents felt that personnel involved in the process had the appropriate knowledge, skills, and abilities to accomplish their tasks at the moderate level or higher.

Question 13 (Table 14) identified the important economic factors identified by survey respondents. "Resources" was the top response noted which is supported by much of the other data collected. Question 12 (Table 13) asked the respondent to identify factors that were key to the success of the contract closeout process. Several of these factors cited were directly related to economics. In particular, skilled manpower was cited as a key success factor by 7% of the respondents. That was the third most frequent response cited. This is not only a resource issue of having the right number of people, but one of having the properly trained people too.

The overall trend in DoD is one of a decreasing workforce due to budget constraints. The contract closeout process involves many steps and many interactions between organizations. As these organizations decrease there are fewer resources (people) to apply to this process. This means that historical backlogs of overaged contracts are difficult to close, and may get even harder to close as they age further. For a centralized contract closeout function, this could mean that not enough people are being assigned due to manpower shortages. For a decentralized function, it means that personnel are insufficiently dividing their already limited time between pre and post-award activities. Not only does this affect the buying activity but as represented in Figure 10, other DoD agencies such as DCMA, DCAA, and DFAS have been experiencing shrinking workforces. [60] From this same report [60], data collected from fiscal years 1993 through 2001 showed that DCAA had a 29% reduction in workforce while DFAS had a 31% reduction in workforce. Manpower is such an important factor that it was also cited most frequently as the resource that was lacking (55%).

Economically speaking, manpower is not the only resource that is dependent, at least partially, on available funding. Respondents also cited information technology, Management Information Systems, and physical facilities specifically as being important resources that were not sufficiently made available. This is logical since

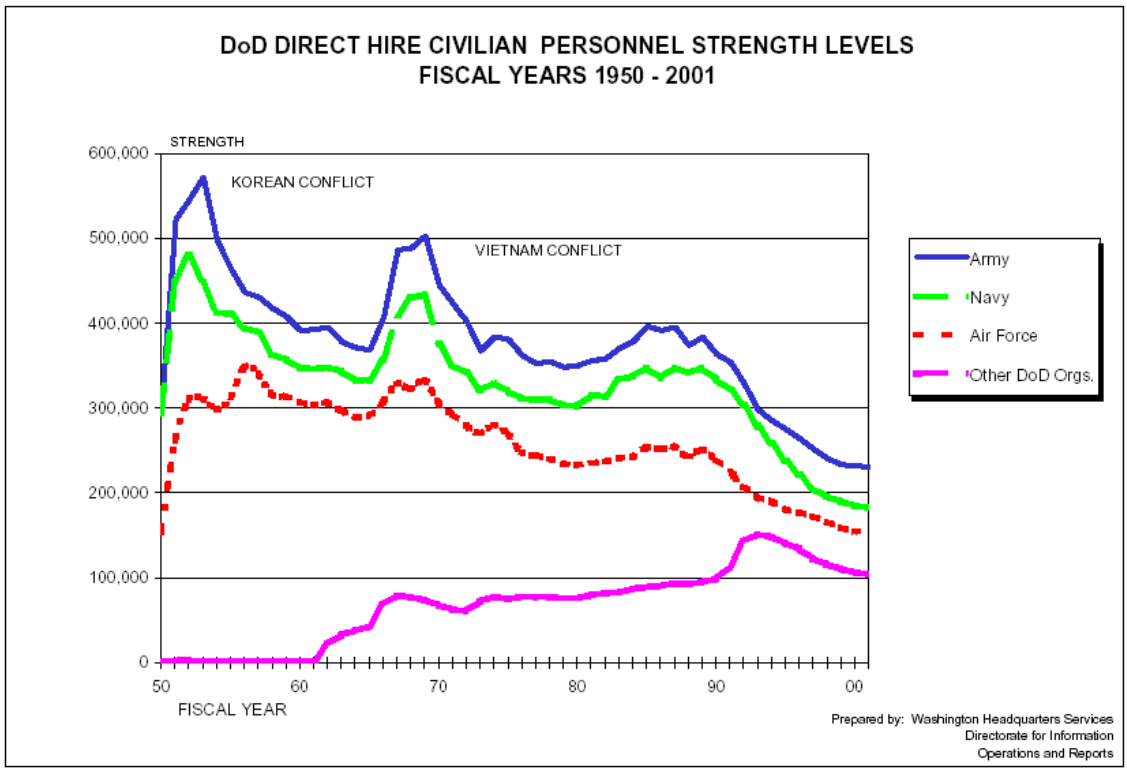

Figure 11. DoD Hiring Trend

[Source: From [60]]

these are the general resources required for the process. The issue of IT and MIS is one greater than just having an available computer with basic software applications. This issue is related to specialized software programs and databases that enable the process participant to access, track, and communicate data that are essential to the contract closeout process. Programs like MOCAS and SPS need to have the functionality and connectivity to support the closeout function. Physical facilities are necessary for the efficient storage and handling of the voluminous backlog of overage contracts awaiting closeout.

In a related vein, time was cited as another resource that was generally in short supply. Time in this case would be an indicator of manpower. As manpower is decreased and the workload rises or even remains the same, the existing personnel need to accomplish more in the same time.

Many other economic factors cited were directly related to the costs associated with the contract closeout process. For example, the process of reconciling

funds and ensuring that funds were either expended or deobligated in a timely manner prior to cancellation was noted in various forms by 29% of the respondents. Not only do these funding issues increase the man-hours required to correctly close a contract but they also hold a monetary penalty if done incorrectly. The final cost to the customer can increase if funds cancel before they are expended, thus requiring replacement funds from current year budgets. Additionally, funds may be deobligated with insufficient time to return to the customer for re-use elsewhere.

Several economic factors cited seemed to be factors that increased the complexity of contracts that need to be closed, thus increasing the man-hours that are necessary to close the contract. These factors include contract type/complexity, multiple appropriations/fund cites, contract age, claims, over/under-runs, mergers and acquisitions, progress payments and with-holds, and the use of incentives. These types of contracts would require extra attention, follow-up, and tracking to ensure that all of the steps were correctly accomplished.

Questions were asked that concern the types of communication that were most preferred, most effective, and most problematic. Meetings were identified as the least problematic, but were rated in the middle as far as preference and effectiveness when compared to other means of communication. From an economic standpoint, the availability of funding for travel and the time invested in meetings may play a role in any decreasing use of this method of communication. The utilization of teaming strategies to overcome contract closeout pathologies may also be negatively impacted by an inability to fund the logistics associated with such a strategy.

c. Social

Respondents were requested to identify social factors in Question 14 (Table 15). The top two responses were categorized as workload assignments and priorities, which are two inter-related issues. One can surmise that the supervisor will make workload assignments based on the priority of the work to be completed. These responses may be more internal to the process vice external to the process for a centralized closeout function. For a decentralized closeout function these responses can be considered external since pre-award priorities may displace or exceed the priorities placed on the closeout workload assignments.

One of the intents of the researcher was to gain additional insights into the feelings of others towards the contract closeout process. Some of the responses did provide this insight. The reputation of personnel working in contract closeout, as well as the career enhancing prospects of such an assignment were responses that were noted. Both responses were negative. This means that respondents (12%) felt that contract closeout had the reputation of being a poor assignment that did not enhance career or promotional opportunities for those within the process. Personnel who are aware of these perceived facts would be hesitant to accept or volunteer for an assignment that primarily involved contract closeout.

Five other responses: visibility/supervisory concern, lack of support, resources, guidance, and personnel turnover (22%) may indicate that the contract closeout process is viewed not only by the working level personnel, but also by management, as a low priority work assignment. Low priority work assignments may also be directly related to the level at which the assignments are considered career enhancing. In the host Command, centralized contract closeout personnel are generally at a lower grade level than their contemporaries with the same length of service who are not in that centralized activity.

An interesting finding was that low morale and lack of respect were cited as social factors. This was supported by another question which revealed that only 31% of the personnel familiar with centralized contract closeout operations rated the morale of the centralized personnel as the same or higher when compared to like personnel not in the centralized function. Fifty-one percent of the respondents thought that the morale of centralized function personnel was lower than other personnel. Certainly a low priority assignment with limited career enhancement potential will contribute to lower overall morale.

Two other related social factors were performance metrics and peer pressure/intimidation. The reliance on a few limited metrics as a sole indicator of productivity may force more competitive or antagonistic behavior amongst participants who are working towards similar goals. Additionally, forcing personnel to meet metrics

that they perceive to be a poor indicator of actual performance can lead to discouragement and lower than normal morale.

d. Technological

Specific questions were not directed at this area although many answers did touch on it. Communication was cited as one of the three most frequent key success factor responses. From a technological standpoint the adequacy of the communication means is important to the success of the contract closeout process. Technology based communication types in general were more preferred, more effective, and less problematic. This included the use of email, facsimile, and telephone. Due to decreased costs and increased availability, these technologically enhanced methods of communication impact the efficiency of the contract closeout process in a positive manner. With increased availability of videoconferencing, the face-to-face meeting may become more of a rarity in the future. It was not surprising that overall, US Mail was one of the most problematic, least preferred, and least effective modes of communication.

Several other key success factors touched on technological issues in the macro sense. As paperless initiatives become reality the organization, accuracy, and completeness of contract files, records, and documentation may become effortless. The most frequently cited key success factor was the quality of the records and documentation. As systems are developed to automate and digitally store this information, contracts should be easier to closeout based on the instant availability of quality records.

Resources and IT/MIS were also cited as key success factors that can hinge on the level of technology available in the environment. A social factor, duplication of work, that was cited by respondents is actually a technological factor since it is the level of technology or lack thereof that requires the re-entry of data or additional processes. IT and storage facilities were cited as resources that were lacking by 23% of the respondents. IT systems in this sense are not hardware, but really the software systems, databases, and connectivity required to facilitate the contract closeout process. All too often the respondents cite the inability to access the data they need or the inability of data from one system to be easily imported and used by another system as an impediment to the contract closeout process. Storage facilities do not seem very

technological in nature, but systems are necessary to track the locations of stored documents as well as provide technologically based filing and retrieval systems to better manage stored contract files and documentation. Many of the problematic closeout steps to be discussed later are compounded further by the lack and availability of organized and complete files.

2. Key Success Factors

The three most important key success factors indicated by the survey results are: (1) good records, (2) teamwork, and (3) manpower.

Good records, to include contract records, payment records, and documentation are key elements to the contract closeout process. This factor is related to other factors mentioned like good finance records, organization, and good contract administration. This makes sense since the closeout process is very dependent on documenting that the required steps have been completed. One of the most problematic contract closeout steps, "prior year indirect cost rates are settled", was exacerbated by lost, unavailable, or incomplete contractor records. [33] As contracts age, are modified, or as key personnel leave or no longer work on that particular contract the chances of paperwork getting lost or misfiled increases. The fact that many of the problematic closeout steps take a long time to complete means that there is a longer time period available to lose or ruin what once may have been organized files. The fact that good records were cited at the top of the list is an indication that there is definitely a current problem with the adequacy of records.

Teamwork is the second factor key to the process. Teamwork, cooperation, communication, and coordination were related factors that were also often cited as being possible solutions to some of the problematic closeout steps. The contract closeout process involves many organizations with different goals, objectives, and priorities. Success is dependent on all of these organizations working together in their areas of expertise to close contracts. Whether through necessity or innovation, instances of teaming have shown promise or impressive results in the contract closeout process. DCAA and DCMA took the lead in an aggressive Integrated Product Team (IPT) to reduce the backlog of final indirect rates. [33] DCAA and DCMA have also teamed in an overage contract closeout initiative at DCMA Baltimore to successfully close over 8,000

contracts. [12] Forming teams may be an expedient way of enhancing the communication process as well as fostering a deeper understanding of the roles and responsibilities that each process participant undertakes. Effective teaming arrangements may require additional resources such as funding for travel and training or the investment in additional time.

The third major key success factor grouping is skilled manpower and knowledge/training. Although this was previously discussed in light of economic constraints, it remains a fact that personnel are the main asset and resource in this process. Not only are people necessary, but they must be able to interact and communicate effectively in the process. Based on some of the other data collected one might have expected manpower to be much higher on the list. Inadequate resources were cited by the majority of the respondents, however manpower was not the most highly rated factor for success.

Some of the factors reported were really problematic process steps that needed to be accomplished to complete the closeout process. This included things such as audits/rates and final vouchers. These data really refer to tasks/jobs that are problematic to the process and thus are key indicators of success of the process when completed. This implies that process success may be relatively easy to attain once these problematic steps are accomplished.

Towards the bottom of the spectrum of factors noted were some individual traits such as dedication, persistence, and organization. These are traits one might expect successful participants to exhibit. Dedication is not surprising since it is probably key to the success of any process. However, dedication is really determined by priorities. A person with a finite amount of available time will dedicate their time and effort to those items that have been identified as priorities. Persistence is interesting in that it implies that the individual has to keep trying or keep at some step in the process to ensure its completion. This could be a sign of poor teamwork or interaction amongst the participants if persistence is cited as such an important trait. At best it indicates that the step or process takes too long to complete. Organization is important not only as it pertains to physical records but also to the day-to-day handling of tasks. Personnel often

work on closing many contracts at the same time. Organization is important for these people to track the current status of each step in the closeout process for each contract. This is a key skill for those who must multi-task in this manner.

Another set of related key success factors were good process/procedures. In one sense this is interesting in that the FAR is very explicit about the particular steps that need to be completed for a proper closeout. Although the FAR spells out the basic steps to accomplish for contract closeout, each participating organization has its own specific guidance on how it accomplishes its responsibilities in that process. One would expect that this process that has essentially remained unchanged for many years would have been fine tuned and well understood by all participants by now. Some respondents noted that personnel were not familiar with the local policies or procedures covering contract closeout.

3. System Direction

System direction consists of mandates, values, mission, strategic issues, vision, goals, and strategies. Generally the overarching written system direction documentation is very broad and not very specific to the contract closeout process. There are occasions where there will be specific higher-level mandates (such as Business Initiative Council initiatives) or organizational strategies that pertain directly to the contract closeout process. The real interest lies with how organizations behave towards the contract closeout process.

Command priority or concern was the dominant theme in the questions concerning system direction. Many of the survey questions touched on the level of importance put on the contract closeout process by the respondent's command. The purpose was to first determine if the commands are communicating that the closeout process is important. Secondly, we wanted to determine if the commands are behaving in a manner consistent with their communications. Finally, we wanted to determine how that might affect the respondent.

As one might expect, most of the personnel from DCMA and the Buying Activity felt that their command communicated the "somewhat" to "extremely" level of importance of the closeout process. This was followed by contractor personnel who were

centered on the "somewhat important" level. DCAA personnel were surprising in that almost half of the personnel ranked contract closeout as a "neutral either way" or lower level of importance. From this one can infer that supporting the contract closeout process is not a priority with DCAA personnel. This lack of priority by DCAA is a recurrent theme noted in survey responses.

The personal belief of contract closeout importance shows that in those commands that communicate and behave in ways that stress the importance of the process, personnel tend to feel that the process is important themselves. However, these same commands tended to communicate a level of importance greater than the level that was indicated by their behavior.

The impact of command priority trickles down to many other areas that can adversely affect the contract closeout process. If command priority is not established, timeliness becomes an issue. The timeliness of the contract closeout process is always under scrutiny. Respondents expressed concerns about the lack of timely action on the part of other process participants. Ten years ago a study found that up to 33% of the process delays were attributed to DCAA. [34:p. 47] The general consensus is still the same. Respondents cite DCAA and their activities as a major source of delay in the process. This may be another indicator that supporting the contract closeout process is not a priority with DCAA leaders.

Many of the other input factors can be heavily influenced by this issue of command priority. For example, economic inputs such as the application of resources within an organization is based on the command priorities of that organization. People, funding, and equipment will be applied to the highest priority issues.

Social factors such as visibility and management concern are also elements heavily influenced by priorities. A process given a higher priority will receive greater visibility and management concern than a low priority item. Most respondents felt that the contract closeout process did not get enough visibility or management concern. That seems to be a shift in feeling from previous studies that determined most personnel would not want to increase the priority of the contract closeout process. [34:p. 50] One can only surmise that the reason not to increase the priority of contract closeout in the past was to

avoid visibility for a process that you could not influence or change. Today's feeling is that with a higher priority and visibility, greater resources could be applied to the process resulting in positive outcomes.

Another often cited influence was workload assignment. Workload assignments are directly related to a command's priority. The priority process will control how workloads are assigned. This impacts the decentralized closeout function as well as the supporting organizations. For example, many respondents felt that contract closeout was not a priority with DCAA. If DCAA management prioritizes pre-award audits and proposal evaluation support over closeout audits, then that is the work that the auditors are going to complete.

Key success factors are influenced by command priorities. Although only 6% of the respondents directly cited this as a key success factor, one can trace its influence to many of the other factors as already noted.

A last item under system direction is the actual guidance and regulations that define the process and procedures to be used for contract closeout. These processes and procedures may be spelled out via external mandates such as the FAR and through local amplifying instructions such as DCMA's OneBook. Good processes and procedures were cited as key success factors. Organizations can influence this by ensuring the processes and procedures described are kept as simple as possible and up-to-date as the operating environment change. Where possible there should be maximum flexibility incorporated into these. Several respondents cited the potential rigidity of the process as a factor to consider.

There are several subtle changes in the inputs area from the OSFM constructed in Chapter IV and what will be summarized in Figure 11 at the end of this chapter. Under environment/context, the following additional elements were added: replacement funds, contract complexity, time/timeliness/, contract age, audits/rate settlements, and reputation/morale. These additions were based on the level of importance of these items that was realized during the data analysis. These items impacted multiple areas within the model. Under key success factors, there was some consolidation of factors. Record documentation was rolled up into records. Knowledge/training was rolled up into skilled

manpower. Time/timeliness was rolled up into the broader element, resources. Lastly, a new element was added, good contract administration. Consolidation was done to group related items of similar importance. A related item of greater importance was called out individually. For example, skilled manpower is a resource, but it was so often cited as being important that it was not rolled up in order to provide greater emphasis on it. Finally, under system direction two new areas of emphasis were added; that of command importance and command behavior. Guidance was rolled up into process/procedures while performance metrics were to be covered in the output section under results.

D. THROUGHPUT DATA ANALYSIS

Throughput data analysis examined the data that related to: (1) task/job, (2) people, (3) technology, (4) structure, and (5) process/subsystems.

1. Task/Job

Questions were asked in order to determine the most difficult of the basic 15 steps as well as the steps that took the longest to complete. It is interesting that the top four answers in each category were exactly the same. The most difficult steps also took the longest to complete. These are referred to as the most problematic steps.

"Contract audit complete" was the top problematic step cited. This is corroborated by other studies as well. [34:p. 47] We have already shown that other process participants consider DCAA a root cause of many delays. Findings from previous studies have shown that personnel feel that audit agencies are not focused on closeouts. [58:p. 3] Audits were cited as the sixth most frequently cited key success factor and the third most frequently cited economic factor. Twenty-eight percent of the respondents stated that DCAA support was somewhat adequate or less. Respondents (14%) stated that DCAA support was not adequate for the contract closeout process. What is somewhat surprising here given the general consensus concerning DCAA support is that only 32% of the personnel have seen evidence of acquisition reforms that can reduce the reliance on DCAA. This step does not have quite as many different participants involved as other more complex steps. This does involve an initiator to request the audit as well as close coordination between DCAA and the contractor for

completion of the audit. Accurate and complete records are necessary for this step to occur.

Solutions to the problem of completing the contract audit involved increasing audit personnel as well as teaming with DCAA. As shown earlier, increased manpower may be an issue based on economic concerns and the prevailing DoD trends that were discussed earlier in this chapter. Teaming with DCAA seems at first glance to be a possible solution, however it is DCAA personnel that must complete the actual audit. Other participating personnel can assist in keeping DCAA informed and keep the external pressure on DCAA to provide the resources to accomplish the necessary audits. Timeliness and elevated priority were related solutions that were also mentioned. The general consensus appears to be that DCAA personnel, in addition to being understaffed, are not working at a level of productivity or at a sufficient level of priority expected by other participants in the process. These issues need to flow down from DCAA higher management to really impact the behavior of the actual auditors. There is not much else working level participants can do to effect this priority other than making persistent queries and monitoring of the audit status. Other solutions included changing the process or using alternatives such as risk assessments or quick-closeouts. These may alleviate the problems associated with the DCAA support issue but can potentially increase the workload of the DCMA and buying activity personnel. Manpower is a limited resource among all organizations involved in the contract closeout process. Based on the surprisingly low utilization of these reforms, manpower and specific training may be responsible issues.

The second most problematic step was "prior year indirect cost rates are settled". Historically there has been a backlog of rate settlements. [33] This is a step that involves a submission by the contractor, evaluation by DCAA, and negotiation by DCMA. It is possible that the increased number of interactions in this step help to make this problematic. Additionally, the contractor was often mentioned as a source of delay in this step. An unresponsive contractor will not submit the indirect rate proposal in a timely manner. Additionally there may be potential problems with allowable costs that need to be negotiated. This is compounded by the fact that these rates, when finally negotiated can have a great impact on all of the contractor's work during that period.

Therefore, a contractor will want to negotiate the very best deal possible using the most favorable rates and data that they can. Other problems that added to this issue included the availability and quality of contractor records.

Once again the top solution cited involved increasing the manpower resources made available to complete this step. This would include DCMA and DCAA personnel. Realistically the contractor may need to make additional personnel available to assist in the proposal production and negotiation process. A group of related potential solutions included improving DCAA efficiency and improving DCMA's focus. These are forces that must be applied from organizational management downward to be effective. Unlike a specific contract audit, indirect rate settlements are only completed once per contractor per their fiscal year. It should be much easier for DCMA and DCAA personnel to plan for this step. Another related grouping of solutions were to increase the use of quick-closeout procedures, utilize risk assessments, modify the basic process, and simplify the Cost Accounting Standards (CAS). These are all solutions to generally avoid the problem vice fixing it. The more responsibility that is shifted away from DCAA puts more workload on some other organization. Lastly there was a group of solutions that included penalties, motivating the contractor, and teaming with the contractor to expedite this step in the process. Timeframes are established for the submission and processing of indirect rate settlements, however there does not seem to be adequate monitoring or enforcement of these timelines or penalty for non-compliance.

The third most problematic step was "contractor's final invoice has been submitted". Table 53 correlates the top defense contractors in regards to submitting late final vouchers. The first column is the overall contractor ranking based on total dollar value of DoD business. The second column is the overall contractor ranking based on the number of late submissions of final vouchers according to DCAA. One wonders if the Government has the leverage to incentivize these contractors to submit final vouchers in a timely manner. Based on the total DoD dollars at stake the answer should be "yes". However this must not be the case since this was historically and still is a very problematic closeout step. A contributing factor to this problem is the lack of responsiveness by contractors. Contractors are unresponsive because in most cases they have already received either all or the majority of the funding that they would receive

anyway. From the contractor's perspective the cost associated with preparing and submitting the final voucher may exceed any benefit to be derived from that action.

The first grouping of solutions included using larger with-holds or better incentives to increase contractor responsiveness and ensuring that final invoice submission was routinely reflected in the contractor's past performance rating. These are just two methods that may allow the Government to get the appropriate level of contractor support for this process step. There may be a requirement to develop a system or mechanism to monitor this issue.

Table 53 Top Contractors For Late Final Voucher Submission

DoD Rank	Late Rank	Company	DoD Dollars
1	3	Lockheed Martin Corp.	$15,130,223,000
3	8	Northrop Grumman Corp. (PRC)	$11,122,116,000
4	1	Raytheon Co.	$5,875,142,000
9	6	SAIC	$1,774,863,000
10	10	TRW Inc.	$1,970,383,000
16	9	Honeywell Inc. (Allied Signal)	$914,654,000
68	7	CACI International Inc.	$260,912,000

[Source: After [26][11] Adapted by researcher]

Avoidance strategies included utilizing quick-closeout or unilateral closeout procedures. These strategies may put the Government at an increased risk of future claims. A few solutions centered on DFAS with comments to increase their efficiency and improve systems or methods of tracking and controlling final vouchers and payment records. There were some reports of final vouchers being lost or not processed in a timely fashion. Lastly teaming and increased cooperation amongst the process participants was offered as a potential solution. This is a process that involves several different organizations and may also require the prior completion of other steps.

The fourth most problematic step was "contract funds review is completed and deobligation of any excess funds is recommended". This is also a step that involves many organizationally diverse participants as well as the reconciliation of data between several information systems that are not necessarily interconnected or equally accessible. This is the step that most involves DFAS personnel who must coordinate with DCMA

and often time the buying command as well. This step is probably the most impacted by the diversity of IT and MIS systems.

One grouping of solutions included increasing coordination with DFAS, teaming on difficult contracts, and better utilization of the ACOs. Coordination with DFAS means that data has to be shared and accessibility becomes an issue. Additionally there must be processes in place to address and correct the reconciliation errors that will inevitably be found. Another grouping of solutions included increasing communication, better IT support, and better process feedback. Lastly increased training, relaxed funding restrictions, and more personnel were cited as potential solutions.

2. People

The most important element pertaining to people is their training. Do the people we have in the contract closeout process have the right set of knowledge, skills, and abilities to do their jobs? There was general consensus that personnel had the appropriate knowledge, skills, and abilities (KSAs) to complete their work even though training was not always available or considered sufficient. It does not appear to take long for personnel to gain proficiency in the mechanics of contract closeout. However, most of the training received was on-the-job with little or no formal training taking place.

Personnel not properly trained in the process are not going to be productive. Some studies indicated that up to 85% of personnel working in the contract closeout process received no formal training. [34: p.46] Specifically, this seems to apply to buying activity personnel although to a degree it can be considered system wide. There are few training programs specific to the closeout process. In a unique partnership between the Army and DCMA, contracting officers from the Acquisition Center University did rotations with DCMA ACOs to receive hands-on training on the contract closeout process which they could then take back to their commands. [46]

Experience, education, and DAWIA certification levels have been discussed in the demographic section of analysis, however it is important to re-iterate their importance. It has already been shown that KSAs and resulting level of expertise are directly related to the level of training and experience. Although education and DAWIA certification level alone do not indicate the level of expertise that may exist they are

indicators of potential. Additionally, they establish a common framework on which expectations can be based.

Skilled manpower was the third most frequently cited key success factor which helps to establish its overall importance to the process. Manpower was also included in resources which was the number one economic factor cited and was cited by most respondents as being insufficiently provided. Manpower, or the perceived lack of sufficient manpower, were possible causal or contributing factors to many of the most problematic contract closeout steps. Many proposed solutions involved adding manpower in one organization or another.

3. Technology

Information Technology (IT), resources, and communication are the most important elements that can positively affect the workflow of the contract closeout process. Most respondents indicated that there were insufficient resources for contract closeout activities. Physical resources cited included information technology and storage facilities. The contract closeout process is currently a paper intensive process that involves mailing or faxing documents several times between multiple parties. Because of this, IT holds one of the best promises for gains in productivity.

One of the major programs to potentially impact the contracting community is the implementation of the Standard Procurement System (SPS). In theory this would be a great tool for the contracting field by decreasing data entry redundancy, eliminating paperwork, and automating workflows. However, a recent audit has found that many current SPS users feel that: (1) their workload has increased, (2) their productivity has not increased, and (3) SPS is not helping DoD attain their paperless contracting goal. [17:p. 2]

Contracting systems are not the only piece of IT in the process. A recent Rand report recommended that DFAS adopt a proven commercial software product vice continue with its own system development that has resulted in a poor product. A second Rand report recommendation was for DFAS to make more use of the internet to quickly disseminate disbursing and accounting information to its customers. [44] Not only do the functions and organizations need the systems in place to help them do their work but the

systems must also be able to communicate and share data. A recent GAO report [55:p. 2] found that a significant contribution to the Government contract payment problem was the issue of nonintegrated computer systems that required redundant manual entry of data.

IT was the seventh most frequently cited key success factor and the second most frequent resource that was found lacking. Not only can IT solutions aide in data management and flow but they can also be used to make communications more effective. This was touched on briefly under key success factors.

4. Structure

The preferred structure recommended for a contract closeout function was overwhelmingly a centralized format. There were good arguments made for both choices however the responses supporting a centralized function seemed stronger, especially when one considers the other data provided. The major reason to decentralize was the greater familiarity of the contractor/contract by the pre-award staff. However, based on the data gathered there seems to be a lack of command priority concerning contract closeout. There is obviously a learning curve associated with centralized personnel picking up a new contract for closeout. However, it may be easier to deal with that learning curve than to raise the pre-award priority of contract closeout. Additionally, any learning curve associated with picking up a new contract is probably over-stated. Pre-award personnel rotate through positions now and manage the learning curve with little or no loss in productivity. This argument also ignores the fact that the Government and particular organizations often contract with the same contractors, so it may be logical to assume that personnel working contract closeouts will develop relationships over time with not only contractors, but also personnel at supporting organizations such as DCAA, DCMA, and DFAS. A recent OIG Audit attributed part of NASA's closeout backlog based on the fact that they had previously decentralized the contract closeout function. [35:p. 6]

A second reason to decentralize was that the pre-award personnel would be more accountable for contracts that they award if they knew that they would be directly responsible for closing them. Contracting officers should be accountable for contracts they award regardless of who is responsible for administration and closeout. The general

lack of command priority and management concern towards contract closeout issues lessen the chance that pre-award personnel would have increased interest in closing contracts. Personnel with experience in centralized contract closeout branches have generally reported that physically complete contracts do not arrive to the closeout activity in a timely manner. If pre-award personnel cannot prioritize the transfer of contract files to a closeout branch, how can they possibly have the priority set to complete the closeout process themselves?

The top reason to centralize the closeout function is the lack of pre-award priority. The multitude of documented growing backlogs supports this. A centralized function can focus on the process and by consolidating the resources can experience economies of scale. The next series of reasons to centralize were dedicated/focused support and specialization/training. This first reason has already been addressed. By centralizing the function it is much easier to train personnel and easier for them to gain expertise by exercising the process over and over. Decentralized personnel would not close as many contracts in a given period of time so their level of expertise would logically be lower. This could result in more errors and problems encountered in the process.

Standardization of the process and control were other reasons noted. By centralizing the function it is easier to establish standard operating procedures and ensure that all participants are following those procedures. Consistency within an organization should make it easier for personnel from other organizations to interact since they can expect a standard. Control of the overall process is also facilitated by centralization. One supervisor can set the tone for the process within that closeout activity. Centralization allows the organization to present one closeout-related face to industry. Lastly, centralization allows a command to emphasize the importance and uniqueness of the process in order to accord it sufficient priority

5. Process/Subsystems

Acquisition reforms and streamlining are some of the most important issues under process/subsystems. Although highly touted, most respondents saw no evidence of acquisition reform or streamlining in the contract closeout process. Those who did cited quick-closeout procedures, use of the DCAA Cumulative Allowable Cost Worksheet (CACW), and unilateral rate settlements as the types of reforms most often seen. Quick-

closeout procedures were cited mainly by personnel in the contracting function. This reform was cited as a possible solution to two of the most problematic steps in order to overcome time issues with DCAA support on audits and rate settlements. However, there are limited situations were this procedure can be used and it does place added risk and burden on the contracting personnel.

The CACW was most often cited by DCAA personnel as a reform being used. This allows the auditor to accumulate allowable costs for each contract on a yearly basis, which would make the final audit a much simpler and speedy process. The only downside to this was a recurring complaint from DCAA personnel that they were not always notified of new contract awards in a timely manner. In fact some personnel stated that they were not notified of new awards until the request for the final audit was received. This lack of notification not only hampers DCAA's ability to plan and forecast support requirements and resource allocation but it also impedes their capability to fully implement a reform like CACW that could save time and effort.

Some respondents noted redesigning/standardizing forms as a streamlining measure. Creating standardized forms or templates surely saves time as well as presents a standard interface to other participants in the contract closeout process. Although the survey was specifically targeting the Department of the Navy activities and support, it should be remembered that most of the process participants support the other DoD Services and agencies. Some even support civilian agencies. The more standardized the forms and processes are the easier it would be for personnel to perform their tasks.

As previously noted, contract audits were the most problematic step of the contract closeout process. The use of waivers and risk assessments were identified as other streamlining measures to avoid unnecessary delays by DCAA. Use of these reforms puts increased risk on the Government as well as increased workload on the contracting personnel.

It was somewhat surprising that increased ACO delegation was barely mentioned in this section. DCMA personnel commented that they are frequently not delegated sufficient authority to complete all necessary closeout tasks. For example, in some cases they were not delegated authority to negotiate or make funding changes to contracts.

This requires DCMA to play the role of a middleman between the buying activity and other participants, which only adds another hand-off point to the process with limited value added. Another reform or streamlining technique that was noticeably absent was the use of IPTs or other teaming arrangements to attack backlogs of overaged contracts. This is surprising given the number of documented success stories noted in the literature.

Historically, reforms and streamlining have not been heavily used in the closeout process. A prior study cited the relatively low threshold associated with quick-closeout procedures as a reason that it was not used more often. [34:p. 48] Since that time, the threshold has increased but recent evidence does not yet show that this procedure is being used extensively. Perhaps this is a function of training and experience. As was previously noted there are few if any training opportunities that are specific to contract closeout processes and procedures. Reforms may be noted and incorporated into regulation, however the training required to implement these reforms may not be readily available.

A second major impact to the contract closeout process is the level of support provided by the various organizations and functions involved. There were several questions that rated the level of support received from various functional areas or organizations. DCAA not only had the highest percentage of responses that stated they did not provide adequate support to the process, but they also had the lowest percentage of responses stating that they always provided adequate levels of support. This is probably a direct result of DCAA involvement or cognizance over some of the most problematic closeout steps noted. The next organization that was rated poorest in the same way was the contractor. Many steps are initiated or triggered by an action that the contractor must take. For instance, the contractor must submit a rate proposal package to initiate the settlement of prior year indirect rates. The contractor also has the onus of submitting the final voucher. These steps were also cited as most problematic which resulted in the general consensus that the contractor is not adequately supporting the process. On the other hand, finance personnel were evaluated as the highest for always providing adequate support. DCMA and contracts were the next best group having the highest ratings of "always" coupled with the fewest ratings of "no". This may be

expected since they can be considered two of the major stakeholders in the contract closeout process.

Management concern and command importance have already been covered in some depth. The data show that the levels of commitment and support provided by management is considered inadequate.

There was only a minor change in the OSFM constructed in the previous chapter based on what has been analyzed in this chapter. In the throughput or design factor section of the model, the people category was modified to include experience, education, and DAWIA certification level. These were added because the researcher felt that they were important indicators that supported the KSAs of personnel involved in the process.

E. RESULTS DATA ANALYSIS

Results data analysis examined the data that related to: (1) culture, (2) outputs, and (3) outcomes.

1. Culture

Perceptions, both internal and external, are some important elements of culture in this model. We have already discussed the importance associated with the perceived level of command attention and priority attached to the contract closeout process. We have seen the link between the level of importance communicated by a command and the resulting personal level of importance of the individual. Many of the social factors cited by respondents were based on their perceptions of the contract closeout process. There was concern expressed by the respondents about the reputation of personnel who work extensively in the closeout process. Due to the lack of command priority some individuals were concerned that working closeout issues was not career enhancing. Associated with this was the potential problem of low morale and lack of respect for personnel working contract closeouts. Regardless of their degree of truth or factual basis, perceptions help to mold the culture associated with the contract closeout process.

The consensus seems to be that the majority of respondents do not feel that personnel should work exclusively in the contract closeout process for extended periods of time. Only 13% thought that assignments to a centralized contract closeout function

should be permanent. The bulk of respondents (51%) felt that one to two years in such an environment would be optimal. This seems supported by the fact that most respondents thought that it did not take long to master the mechanics of the closeout process yet the very nature of the process requires a minimum amount of time to actually achieve some level of acceptable productivity. This is probably based on the four most problematic steps discussed earlier in this chapter and the fact that the period of time required to close out complex contracts is usually extensive. Extended assignment to contract closeout activities fosters a subculture within the organization that appears to negatively impact things such as motivation and morale.

Motivation of those in the centralized contract closeout function was rated as lower than others by the majority of respondents. This is important for several reasons. Most of the personnel in the centralized function have been in those assignments for extended periods of time well in excess of five years. This is considerably longer than the recommended optimal length of rotational assignments. In essence this has almost become a permanent assignment which was one of the least recommended assignment lengths. This may be one cause of lower than normal motivation. Personnel spending excessive time exclusively with contract closeout activities may be missing out on other opportunities for professional growth and development.

Likewise morale was rated as significantly lower than that of other personnel. One would expect these two issues to be inter-related. Another possible causal factor could be the level of management concern exhibited by both the organizational management and the contracts functional management personnel.

An interesting finding concerns the knowledge, skills, and abilities (KSAs) of personnel involved in the contract closeout process. The data from Question 18 (Table 28) established that most respondents thought that personnel involved in the contract closeout process had the appropriate KSAs to complete their tasks. In fact, 69% rated the KSAs appropriateness level as "moderately" or higher. Only 4% answered "no". In Question 29 (Table 51) respondents familiar with the centralized function personnel provided ratings that almost split the comparison level of KSAs evenly in thirds between "lower", "same", and "higher" levels of KSAs when compared to others.

Perceptions may be based on misunderstandings or incomplete and flawed data. Generally when respondents rated the level of support provided by functional areas and organizations, the ratings were higher for their organization or functional area when compared to the ratings given by those not in that organizational or functional area. This leads one to infer that personnel had a higher perception of their own level of support vice those people from other areas or organizations.

Some of the most important key success factors cited were teamwork, cooperation, and coordination. A low level of morale and motivation would certainly make this success factor more difficult to obtain, especially when one considers the amount of personal interactions that take place between and among the participating organizations. Other key success factors mentioned were management focus, priority, and commitment. Increased pressure from the visibility of this factor can also lead to lower motivation and morale if the resources or means of success are not also made available to personnel. The consensus that resources were insufficient highlights this as a possible contributor to lower than normal motivation and morale.

2. Outputs

There are only two major outputs offered from the contract closeout process. These are closed contracts and liquidated funds. The closed contracts result in many documents and forms completed and other actions taken, but the main result and goal is to close the individual contract. An efficient contract closeout process will result in contracts being closed correctly within the timeframes required by the FAR. Liquidated funds are mentioned to emphasize the financial implications of the process. Funds may be expended and used to pay the contractor, funds may be deobligated and used for other purposes, or funds may be left to cancel to preserve future budget authority that may be required. In any case the funding must be addressed and properly handled to reduce the Government's risk and protect customer budgets. Outputs are dependent on good inputs and throughputs. Key success factors have been discussed in detail. They cover everything from the raw input, which would be the contract file to the major throughput resource, which would be skilled manpower.

Outputs are measured via the metrics selected by management as important and relevant. They provide the diagnostic tool that functions as feedback to upper level

management. In turn, if contract closeout is a priority with management, it will cause them to take action to change the throughputs or design of the OSFM to achieve the desired metrics.

The most often cited metrics were the time necessary to close physically complete contracts and the number of contracts closed. These metrics provide personnel with a rough yardstick of performance. The time taken to close an individual contract is highly dependent on many factors such as contract type and complexity. In itself it does not provide any specifically useful data. Taken over a large representative population of contracts closed, this metric can give you an average number of days it takes to close a contract. This is useful information if you are attempting to decrease an existing backlog or have adequate information on future contracts that will soon become physically complete. This is also the prime metric that indicates whether the required FAR timelines for contract closeout are being met.

The metric, number of contracts closed, gives the output in terms of the final end product of the process to management. This metric alone is also not too particularly useful. It can be coupled with other data to draw additional conclusions. For instance, in a centralized closeout branch the number of contracts closed per time period can give you an idea of the throughput of that branch and some insight into the comparable productivity of each person. Having additional information such as the total population of contracts awaiting closeout can yield a rough idea of how long it may take to dispense a contract backlog.

When addressing the problem of a backlog it is important to ascertain the size of the universe involved. This would be the number of contracts physically complete but not yet closed. This is an important metric to monitor as it will indicate if the contract closeout workload is increasing or decreasing. It will also give an indicator of potential backlog growth as well. This metric is dependent on the number of contracts that have been awarded in the past.

Canceling funds are a prime area of concern in the contract closeout process for the many reasons already cited. Financial and accounting systems need to identify by at least contract, line item, and dollar amount all of the funds that are at risk of cancellation.

In some cases these contracts may be ready to close, but in other cases the funds may be scheduled to cancel well before all of the closeout steps will be completed. This metric will give an indication of the level of extra work that may be required by personnel handling the closeout and can be used to monitor the progress towards a goal of minimizing the funds that cancel. It should be remembered that there are cases where the correct course of action is to let the funds cancel. The goal should not necessarily be to reach zero, but should be to liquidate all of the funds that do not need to cancel. Related metrics could include monitoring of expiring funds as well as all unexpensed funds still on contracts awaiting closeout.

Dollar value of the contracts awaiting closeout and the dollar value of the contracts closed gives another indication of process efficiency. Used in conjunction with other metrics this can provide greater insight into the level of productivity. It can differentiate between the closing of many small dollar value contracts and the closing of a few large dollar value contracts. Management focus should not just be on number closed but also on dollars closed since that is an area of major risk for the Government.

One of the metrics that needs to be further developed is the actual cost to the Government of contract closeout activities. Some of these data can be captured by monitoring the number of hours required per contract closed. At first glance one would assume that 40 hours per week per person can be applied to the number of contracts closed that week. However, this does not take into account other non-closeout duties and activities in which personnel may be engaged. This also would give a better indication of personnel contribution to the lead time required to close a contract. A contract may take months to close but an individual may have only spent 20 hours directly working on the contract.

The number of overaged contracts needs to be monitored. This is an important metric as it gauges compliance with the FAR timelines. Monitoring this metric can allow management to direct additional resources towards those overaged contracts before they become even more problematic. Similarly, the number of overaged contracts closed should be monitored to ensure that personnel are not ignoring the overaged contracts by focusing on the newer and possibly easier to close contracts.

Problematic steps that were previously identified need to have specific metrics established to help identify and monitor specific problems. For instance, completing the contract audit was the most problematic step noted. Commands need to monitor how long it is taking the audit to be completed from date of request through actual receipt of the audit. This will provide data that can be provided to DCAA management personnel to document the existing problem. Additionally there should be close monitoring of final voucher submission. The time required from actual receipt of the final voucher to payment of the final voucher will provide a measure of the level of efficiency of that portion of the contract closeout process and can be used to keep pressure on those contractors who have not yet submitted their final vouchers.

Monitoring the types of contracts that are physically complete but not yet closed can give an indication of future short-term workloads. More complex contract types will probably require more steps and take longer to close. Additionally, this may provide planning data for other organizations such as DCAA that need to support the process.

In an effort to maximize the use of reforms and streamlining, commands may want to monitor the number of contracts eligible for quick-closeout procedures. By following this and related metrics throughout the closeout life of that contract a command could gain insight into the degree of utilization of quick-closeout procedures and compare the closeout metrics with other contracts that were not closed with those procedures.

One problem with outputs is that they need to be effectively tied to performance to retain importance. In general, there has not been contract closeout process outputs tied to individual performance appraisals.

There may be potential downsides to the improper use or over-dependence on the use of metrics. Metrics may not give the desired apple-to-apple comparison if not properly applied to a given situation. For example, one person may close ten contracts in a month while another closes two. Initially one may suspect that the person closing ten was more productive than the person closing two, however closer scrutiny is required to ensure that the comparisons are truly for equal levels of work. It is much easier to close out firm fixed-price contracts than cost-plus-fixed-fee contracts of the same dollar value.

A second potential problem with metrics is the ability to change your work processes in order to maximize your performance as measured by the metrics at the expense of some other unmeasured parameters. For example, if raw throughput was the only metric that individuals were measured against, a metric used might be the number of contracts closed per month. Individuals could neglect more at-risk or overaged contracts in order to inflate their metrics with more numerous contracts that might be easier or faster to close. This is why metrics should be used in context with other metrics.

A final risk associated with the use of metrics is the validity and accuracy of the data used. Relying on inaccurate databases or questionable sources of data may enable the metrics to appear to be reached when in fact they have not. Many systems have been cited that contain either inaccurate data or data that conflicts with data in other systems.

3. Outcomes

The outcomes of the current contract closeout process are the organization's ability to close contracts and the pathologies that exist that can impact that ability. The data suggest that organizations are experiencing difficulty with their contract closeout processes. Efficiency and effectiveness are not balanced or maximized. Contracts are getting closed, but not always within the required timeframes. The decreased output is the first outcome of this process.

The second outcome of the process is the creation and sustainment of various pathologies that impair the process. These pathologies were historically identified in Chapter II as well as discussed within the earlier portions of this chapter. These major historical pathologies include: (1) process friction, (2) inadequate information technology, (3) long-life contracts, (4) personnel skill level, (5) contract financial issues, (6) management concern, (7) perceptions, (8) timeliness, (9) problematic steps, (10) existing backlogs, (11) inadequate manpower, and (12) poor records/documentation. Based on the analysis of this chapter it is evident that these historical pathologies still exist and still hamper process efficiency

There were also some subtle changes from the model constructed in the previous chapter based on the data analysis. Under culture, in the results section internal and external perceptions were rolled up into the broader category of perceptions based on

their high degree of interaction. Assignment length was dropped since it was considered a relatively minor contributing factor towards motivation and morale. If it exhibited a stronger influence on the other data then it might have graduated to a pathology unto itself, but this was not the case. Metrics were shifted from outcomes to outputs since they are more readily associated with the outputs of the process. Outcomes were more generalized with the elements rolled up into two basic categories of outcomes. The positive outcome is the ability to closeout contracts, while the negative outcome is the creation of closeout pathologies. Finally a new step was added prior to completion of the feedback loop. This was the implementation of recovery strategies. Based on the observed outcomes of the process, specific recovery strategies may be implemented to affect the inputs and throughput to get the desired outputs and outcomes.

F. RECOVERY STRATEGIES

Based on the previously identified contract closeout pathologies, data analysis allows the formulation of recovery strategies to overcome those pathologies.

1. Process Friction

Process friction can be minimized or overcome by decreasing the number of participants in the process, increasing the teaming between organizations, and by increasing the efficiency of communications. To decrease the number of participants personnel should be empowered to the greatest level possible. This may include the increased use of reforms such as quick-closeout procedures which may decrease the involvement of DCAA. This also may include delegation to the ACO of all necessary authorities to fully close a contract. Existing problem areas may need increased use of IPTs or specialized short-term Tiger teams to focus efforts at reducing specific problem areas. Lastly, communication between all organizations needs to be as efficient as possible. Points of contact to include updated telephone numbers, email, and mailing addresses need to be kept up to date. Action should be taken to ensure that all personnel have access to all of the information systems necessary to aid them in the completion of their tasks.

2. Inadequate Information Technology

To the maximum extent possible, IT systems should be developed that ensure connectivity and access to all organizations involved in the contract closeout process. Mechanisms should be put into place to ensure that those systems that do not have direct connect capability have the ability to import/export data easily when needed. Additionally, IT systems need the ability to automatically track key milestones of the physically complete contract through the closeout process in order to automatically generate the necessary evaluation metrics. Lastly mechanisms must be put into place to ensure data integrity and accuracy.

3. Complex Contracts

Although each contract is formulated based on the specific circumstances of each acquisition, there should be efforts made to ensure that standardization is used to keep contracts as uncomplicated as possible. Long term contracts and complexly funded contracts increase the difficulty associated with closure. If these complexities cannot be avoided then they should be minimized to the maximum extent possible. Care should be taken to ensure specific recommendations, such as CLIN and ACRN structures from DFAS, are taken into account to ensure closeout processes are not unduly hamstrung.

4. Personnel Skill Level

Each organization should ensure that personnel receive adequate training prior to assignment to contract closeout activities. The placement of new personnel without adequate training into payment, negotiation, or audit positions should be deferred until their skills have been raised to some acceptable level. Continued education and professional development of personnel should be continued. Not only should this include the technical skills required for the job, but this should also include skills associated with effective interpersonal communication, teaming, multi-tasking, and organizing.

5. Contract Financial Issues

There must be mechanisms and procedures put into place that enable participants to quickly ascertain the nature and status of funding on contracts nearing physical completion. Pressure needs to be put on the contractor to maximize proper utilization of contract funding well prior to expiration or cancellation. This will require better dataflow and communication between DFAS and DCMA.

6. Management Concern

Individual commands should be held responsible for key contract closeout metrics by higher commands. Management and those directly working with contract closeout should have at least part of their fitness report or performance appraisal address their productivity as it pertains to the contract closeout process. Other strategies could involve stressing the importance of contract closeout by including a review of the process as part of every post-award contract briefing. Lastly centralizing the contract closeout function can emphasize its importance as well as allow better visibility and focus of effort on any problem.

7. Perceptions

Personnel should be recognized, rewarded, and incentivized to master the contract closeout process. Personnel should not be placed in contract closeout positions for overly extended periods of time. Top performers should be rotated through contract closeout positions. Such rotations should be developed as career enhancing assignments.

8. Timeliness

Contract closeout processes must be recognized at the start of a contract's life-cycle. Well prior to physical completion DCMA should start rigorously pursuing the steps that need to be accomplished. In some cases timeliness may require additional resources to apply to specific contract closeout problems such as DCAA audits.

9. Problematic Steps

Maximizing the use of fixed-price contracts can help reduce the dependence on the most problematic steps. Existing acquisition reforms and streamlining such as quick-closeout procedures can avoid these problematic steps, but at a cost to some other organization. Increasing the contractor's incentives such as past performance input, penalties, or larger with-hold amounts may help to alleviate some of these problems.

10. Existing Backlogs

Existing backlogs require specific application of focused resources. Success has been demonstrated by utilizing trained and motivated teams of personnel to attack backlogs, usually with participants from all of the involved organizations or functional areas. This may involve the use of in-house expertise, personnel from outside of the command or even contractor support.

11. Inadequate Manpower

Inadequate manpower can only be resolved with either overarching systems that streamline and automate the process or by the application of additional manpower. Often times it may not be the manpower, but the focus and dedication of the staff involved. In this case centralizing a closeout function can maximize the focus of relatively few people on the process vice having many people not focused on the process at all which is prevalent in a decentralized structure. Additionally the use of contracted out closeout services has been successful in many documented cases.

12. Poor Records/Documentation

Enforcing standardization, organization, and the use of checklists can help alleviate some of the contract file problems. Additionally a system that annually reviews every contract folder to ensure all documents are present and all data are updated can ensure that files are well prepared for the contract closeout process.

G. SUMMARY

In this chapter we analyzed the data collected via the surveys. Using this information we can adjust the Organizational Systems Framework Model that we incrementally developed in Chapter III. Each section in this chapter identified any changes made to the previously developed model. Based on the preceding analysis we can refine the various elements based on root causes and higher level issues that we have identified. The resulting OSFM is depicted in Figure 11.

Under the input section we have identified the key environmental/context factors as command visibility, resources, canceling funds, replacement funds, contract complexity, time/timeliness, contract age, workload assignments, priorities, audit/rate settlements, and reputation/morale. Key success factors included records, teamwork, cooperation, coordination, communication, skilled manpower, management focus, audits/rates, final vouchers, process procedures, IT/MIS, resources, and good contract administration.. System direction was covered by command priority, command behavior, command importance, and process/procedures.

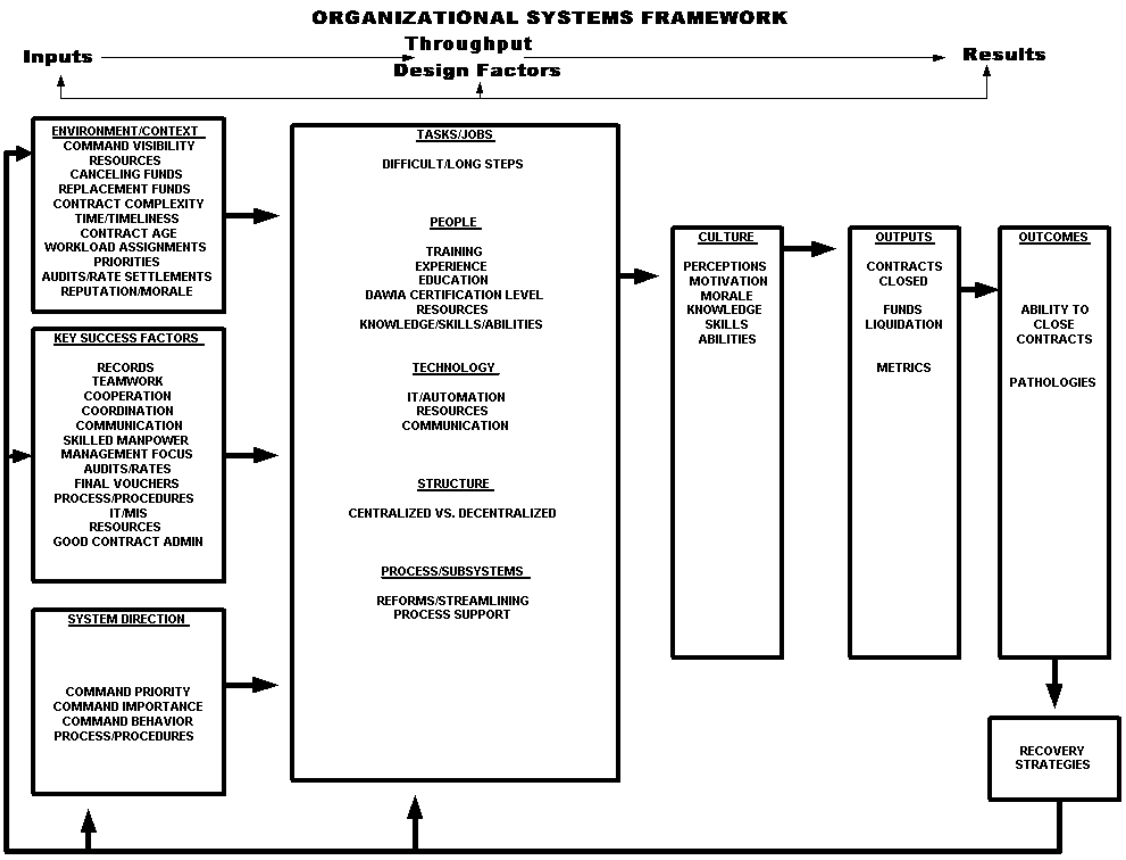

Figure 12. Organizational Systems Framework Model - Data Analysis
[Source: After [47] Adapted by researcher]

Under the throughput section, in tasks/jobs, we have identified the most problematic steps (most difficult and longest) as important to the overall process. Under people, training, experience, education, DAWIA certification level and resources were key. With technology, Information Technology, resources, and communication were identified as critical to the process. Under structure, the type of contract closeout structure being utilized (centralized vs. decentralized) was addressed. The last element identified in this section was the issue of reforms/streamlining and process support under the process/subsystems.

Under the results section, perception, motivation, morale, and KSAs were main themes under culture. Key outputs were identified as contracts closed, funds liquidated, and metrics. Finally under outcomes, the ability to close contracts as well as pathologies were found to be of importance. It should not be surprising that many elements are found

in several places of the model. These elements have multiple impacts on the contract closeout process at multiple levels. In the next chapter conclusions and recommendations will be presented.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

The research conducted as part of this thesis validated much of the historical information concerning contract closeout pathologies. Over the last ten years the same problems and issues seem to constantly come up in audits and inspections of this function. In Section B of this chapter, conclusions will be presented. In Section C of this chapter, recommendations will be presented. In Section D of this chapter, the thesis will be summarized by a review of the research questions.

B. CONCLUSIONS

Based on the research conducted and data analyzed as part of this thesis the following conclusions can be made.

Conclusion #1: Contract closeout is not a priority with the organizations that are involved in the process. Historically many audits, reports, and reviews, as well as recent surveys and studies, indicate that contract closeout has experienced many pathologies due to the lack of priority given to the process as discussed in Chapter II, Section D. Management concern at the organizational level, as well as that at the functional level, is lacking. Data presented in Chapter IV and analyzed in Chapter V support the fact that the majority of personnel involved in the contract closeout process believe that the process is not receiving sufficient management/command level priority. This survey data involved similar responses across organizations.

This conclusion is further supported through ancillary evidence such as the general consensus that the contract closeout process has insufficient resources being applied to it. The allocation of resources is often times a result of command, management, and supervisory priorities. Management focus, priority, and commitment were the fifth most frequently cited key success factor (Table 13) of the contract closeout process, which attests to the level of importance that process participants place on this issue. Priorities were the second most frequently cited social factor (Table 15) that could affect the closeout process as well.

Specifically there has been a trend that identified DCAA as one of the organizations that provides the least adequate support to the contract closeout process. This is supported directly by the data found in Table 34 and indirectly through the analysis of data concerning the most problematic contract closeout steps. The two most problematic steps involve DCAA to a great degree and their lack of priority was cited as a major contributing factor to the problems.

Conclusion #2: Common perceptions of contract closeout are that it is an administrative or housekeeping chore that is of overall low priority in the acquisition life-cycle of any given contract. The literature cited in Chapter II indicates that there is a popular misconception that closeout is the dregs of the acquisition cycle. Common perceptions of personnel involved in the contract closeout process are shaped by what they see and feel. As a result of command and management actions, which were often not aligned with what they said, perceptions are formed in part by what has been discussed in the previous conclusion. Data analysis of data presented in Tables 10, 11, and 12 support the finding that personnel tend to think of contract closeout as an important function more often if their command communicates and acts in a manner that supports that belief. The fact that commands tend to behave in ways that does not indicate that contract closeout is important leads personnel to fashion their own beliefs based on this perception.

Some of the most frequently cited social factors from Table 15 categorize common perceptions of contract closeout workers as having a bad reputation and of the work itself not being very career enhancing. This strengthens the perception that contract closeout is unimportant. Table 15 also cites perceived low morale and associated lack of respect towards the contract closeout workforce.

A last item of data supporting this conclusion is found in Tables 26 and 27. These data show that the majority of personnel believe that contract closeout activities are not afforded sufficient resources to complete the contract closeout steps. A lack of adequate resources can certainly give the impression that an activity is not a priority.

Conclusion #3: There are insufficient manpower resources being made available for the contract closeout process. There have been instances referenced in

Chapter II that cite a general lack of manpower as a contract closeout problem that needs to be overcome. Frequent success stories noted in the same chapter give examples where the infusion of personnel helped to diminish large backlogs. Manpower shortages were a common theme found throughout the data that were analyzed.

The demographic data analysis included data from several additional sources which made the decreasing workforce trends abundantly clear. As the workforce decreases there are fewer people to apply to the many remaining jobs and tasks that still remain. The third most frequently cited key success factor from Table 13 is skilled manpower. A little farther down the same table is the more general category of resources which could certainly include manpower. If the respondents who said resources also meant manpower, the importance of manpower increases as a key success factor.

In Table 14, resources were the most often cited economic factor to impact the contract closeout process. As mentioned earlier, manpower is certainly an available resource and the respondents make it clear that it is a major area of concern. Social factors presented in Table 15 also cite resources and workload assignment as significant factors. Workload assignments can be impacted by a decrease in available personnel resources. Fewer people with the same or greater workload means that remaining people will have to carry a greater workload.

Many proposed solutions to the most problematic steps (Tables 17, 18, 19, and 20) cite increased personnel at one or more organizations as potential solutions. In several cases these were the most frequently recommended solutions. Lastly, in Tables 26 and 27 respondents cited that there was a general lack of sufficient resources for contract closeout activities and that the most frequently resource cited as being insufficient was manpower.

Conclusion #4: There are four problematic steps in the contract closeout process that need to be addressed to make the process more efficient. Per the historical data cited from the literature in Chapter II there were some steps in the contract closeout process that were determined to take longer or be more difficult than others. This was easily validated by the data accumulated from the survey. The survey data presented in Chapter IV (Tables 16 and 21) and analyzed in Chapter V identify the

following steps as being the most difficult to complete and taking the longest to complete. These most problematic steps are identified below in descending order of frequency:

- Contract audit complete
- Prior year indirect cost rates are settled
- Contractor's final invoice has been submitted
- Contract funds review is completed and deobligation of any excess funds is recommended

Chapter V, Section D.1, details the specifics concerning these four problematic steps. The fact that there were four steps identified by so many participants as being problematic is troubling. It is even more so when these same steps were cited in the literature as being historically problematic based on studies conducted up to ten years ago. These data were provided by personnel that had fairly extensive experience and expertise in the contract closeout process (Tables 4 and 5).

In the key success factors cited in Table 13, all four problematic steps are represented in some fashion within the eight most frequently cited factors. Audits and rate settlements were rated sixth, final voucher submission was rated seventh, and funding reconciliations were rated eighth. These steps are so problematic that respondents feel that the successful completion of those steps are very key to the success of the entire contract closeout process.

These steps were also represented in the economic factors presented in Table 14. The implication here is that these steps either add to the Government's cost of closing out contracts or that if they are not completed in a timely or correct fashion , the result could end up costing the Government additional funding.

Conclusion #5: Metrics are not always correctly used, available or accurate enough to help guide management decisions. As discussed in Chapter V, Section E.2, metrics are a dual edged sword when it comes to providing management with the tools required for good decision making. There are many documented instances of databases and systems, such as MOCAS, having incorrect or corrupted data. When

metrics are based on this data it can lead management to make poor decisions. In other words, the user of metrics should ensure that the baseline data used is accurate.

Data concerning effective metrics is contained in Table 45. There are a multitude of metrics that can be collected and utilized to improve the contract closeout processes, however, these metrics need to be accumulated and tracked which in many cases is done manually. Some of the potentially most helpful metrics relating to problematic steps of the process cannot be tracked via many existing automated systems.

Any management use of metrics should be carefully considered, to include input from the lower levels of the workforce who may have valuable insights into the veracity and appropriateness of any proposed metrics.

Conclusion #6: There are several critical pathologies that continue to plague the contract closeout process. Chapter II identified many critical pathologies from the literature. These same pathologies were found when the data were analyzed in Chapter V. These pathologies include: (1) process friction, (2) inadequate information technology, (3) long-life contracts, (4) personnel skill level, (5) contract financial issues, (6) management concern, (7) perceptions, (8) timeliness, (9) problematic steps, (10) existing backlogs, (11) inadequate manpower, and (12) poor records/documentation.

Some of the base causal factors have vast influence on the process as discussed in Chapter V. Some of the more important and overarching issues include command priority, adequate resources, appropriate training, and information technology robustness. The impact of these major problems was seen in the input, throughput, and results section of the model that was developed.

The causal factors of these pathologies span the OSFM, however, the pathologies themselves can be considered an outcome of the current process framed by our model. As recovery strategies are implemented, the model is changed. This change would hopefully give us the desired outcomes and minimize the pathologies.

Conclusion #7: There are several recovery strategies that can be implemented in order to overcome contract closeout pathologies. Chapter II and Chapter V, Section F, highlight historical recovery strategies as well as strategies that

were formulated based on the data analysis. One common element of the potential recovery strategies is that they all require commitment from the participating organizations and recognition of the contract closeout related problems at all levels of a command. Most of the recovery strategies require the reallocation of resources whether they be people, time, or training dollars.

The major recovery strategies cited in Chapter V include centralizing the contract closeout function, tying closeout objectives to performance appraisal systems, recognizing and rewarding excellence in contract closeout efforts, maximizing the use of IPTs or other teaming arrangements, increasing the use of acquisition reforms and streamlining techniques, developing IT systems that enhance the closeout process, ensuring personnel receive specialized training pertinent to closeout activities, increasing the genuine level of management concern, and applying additional resources such as manpower when required.

C. RECOMMENDATIONS

Based on the analysis of the data and the preceding conclusions there are several recommendations that can be made to improve the contract closeout process.

Recommendation #1: Take appropriate steps to make contract closeout a command priority throughout the Department of the Navy. Each command must be held responsible for ensuring that contracts are closed in accordance with the timelines defined in the FAR. Metrics need to be collected, maintained, and analyzed on a monthly basis and then reported to senior management. Senior management needs to be held accountable by the next higher level of management. Commanding Officers need to have the process included as a required element of their fitness report. Likewise, personnel involved in the closeout process at the lowest levels need to have the process included as part of their performance appraisal as well.

Recommendation #2: Develop specialized contract closeout training. To ensure that contract closeout receives and maintains the level of priority that it deserves, and that all participants obtain the standard, specialized knowledge required of the contract closeout process, all DAWIA courses should include a module that relates

contract closeout issues and processes to the curriculum of each offered course. Additionally, DAWIA certification standards should be developed for those functional areas, such as security, that participate in the contract closeout process.

Recommendation #3: Take an immediate look at the four most problematic steps of the contract closeout process and implement immediate measures to alleviate the problems that have historically, and to this day, plague them. These problematic steps include: (1) Contract audit complete, (2) Prior year indirect cost rates are settled, (3) Contractor's final invoice has been submitted, and (4) Contract funds review is completed and deobligation of any excess funds is recommended. There are initiatives and plans in place to address these problems with future systems, however there remains the need to address the current backlogs that exist now. Teaming arrangements should be implemented in addition to specific training that will emphasize the proper procedures and application of the available acquisition reforms and streamlining initiatives to minimize the impact of these problematic steps.

Recommendation #4: Centralize the contract closeout function in as many commands as practical. Commands with backlogs of overaged contracts need to implement a structure that allows them to focus their limited resources on recovery strategies. One of the best solutions to accomplish this is by centralizing the contract closeout function. The centralized function allows better overall control, standardization, and economies of scale in the contract closeout process. These centralized functions should be formed with personnel with a mix of experience levels. Top performers who are being groomed for future leadership positions should be required or highly encouraged to complete rotations in these centralized functions.

D. SUMMARY REVIEW OF RESEARCH QUESTIONS

1. Secondary Research Question 1

What are the critical pathologies that affect the contract closeout process? Utilizing the OSFM that we developed as part of this research we identified critical pathologies that are part of the contract closeout process. These are (1) process friction, (2) inadequate information technology, (3) complex contracts, (4) personnel skill level,

(5) contract financial issues, (6) management concern, (7) perceptions, (8) timeliness, (9) problematic steps, (10) existing backlogs, (11) inadequate manpower, and (12) poor records/documentation.

2. Secondary Research Question 2

What are the causes and contributing factors of each contract closeout pathology?

(a) Process friction: The cause of process friction is the large number of separate organizations involved in the various steps of the contract closeout process and the related number of hand-offs between those organizations required by the process. Contributing factors include varying priorities of the different organizations, physical separation of the participants involved in the process, and the lack of IT systems that ensure data access and connectivity between organizations.

(b) Inadequate information technology: The cause of inadequate IT is the tendency for organizations to develop systems to address their specific problems and processes. Contributing factors include incompatible systems, legacy systems, corrupt data, development costs, and accessibility issues.

(c) Complex contracts: The cause of complex contracts is the unique circumstances surrounding each individual acquisition. Contributing factors include the inability to foresee the impact of pre-award actions on post-award administration and closeout, failure to recognize requirements of other organizations, and the lack of teamwork among process participants.

(d) Personnel skill level: The cause of inadequate personnel skill level is the lack of formal and specialized training on the unique aspects of the contract closeout process. Contributing factors include low priority in DAWIA courses, limited training funds, and minimal cross training of personnel.

(e) Contract financial issues: The cause of contract financial issues is the complex appropriation laws and regulations surrounding the obligation, and expenditure of funds. Contributing factors include the lack of robust IT systems, the plethora of accounting and financial management systems in use, and poor connectivity and data sharing between financial systems and contracting systems.

(f) Management concern: The cause of inadequate management concern is the overall lack of priority that the contract closeout process receives. Contributing factors include the lack of available resources, ineffective use of metrics, and conflicting priorities at the command level.

(g) Perceptions: The cause of poor perceptions regarding the contract closeout process is the lack of management concern and command priority on the subject. Contributing factors include limited resources, poor rotational assignment policies, and the failure to include knowledge of closeout activities as a career development requirement

(h) Timeliness: The cause of timeliness related pathologies is the failure to prioritize contract closeout processes. Contributing factors include availability of resources, conflicting command priorities, and increased process friction.

(i) Problematic steps: The cause of problematic steps is the failure to establish a seamless process between the different participating organizations. Contributing factors include conflicting priorities, limited resources, and process friction.

(j) Existing backlogs: The cause of existing backlogs is the failure of the contract closeout process to deliver the desired outcome. Contributing factors include every pathology inherent to the system that can negatively impact the outcomes of the process.

(k) Inadequate manpower: Inadequate manpower is caused by decreasing budgets and available funding. Contributing factors include the decentralization of the contract closeout process, conflicting command priorities, and low productivity from existing personnel.

(l) Poor records/documentation: The cause of poor records/documentation is the failure to keep files organized and updated. Contributing factors include contract age, personnel turnover, reliance on paper-based systems, and the failure to track and monitor file/record location.

3. Secondary Research Question 3

What are the common perceptions concerning contract closeout? Common perceptions of contract closeout is that it is an administrative or housekeeping chore that

is of low overall priority in the acquisition life-cycle of any given contract. Contract closeout is considered a poor assignment that is not career enhancing nor important for career development.

4. Secondary Research Question 4

What strategies might be utilized to overcome or correct the critical pathologies in the contract closeout process?

a. Process Friction

Process friction can be minimized or overcome by decreasing the number of participants in the process, increasing the teaming between organizations, and by increasing the efficiency of communications. To decrease the number of participants personnel should be empowered to the greatest level possible. This may include the increased use of reforms such as quick-closeout procedures which may decrease the involvement of DCAA. This also may include delegation to the ACO of all necessary authorities to fully close a contract. Existing problem areas may need increased use of IPTs or specialized short-term Tiger teams to focus efforts at reducing specific problem areas. Lastly, communication between all organizations needs to be as efficient as possible. Points of contact to include updated telephone numbers, email, and mailing addresses need to be kept up to date. Action should be taken to ensure that all personnel have access to all of the information systems necessary to aid them in the completion of their tasks.

b. Inadequate Information Technology

To the maximum extent possible, IT systems should be developed that ensure connectivity and access to all organizations involved in the contract closeout process. Mechanisms should be put into place to ensure that those systems that do not have direct connect capability have the ability to import/export data easily when needed. Additionally, IT systems need the ability to automatically track key milestones of the physically complete contract through the closeout process in order to automatically generate the necessary evaluation metrics. Lastly mechanisms must be put into place to ensure data integrity and accuracy.

c. Complex Contracts

Although each contract is formulated based on the specific circumstances of each acquisition, there should be efforts made to ensure that there is standardization used to keep contracts as uncomplicated as possible. Long term contracts and complexly funded contracts increase the difficulty associated with closure. If these complexities can not be avoided then they should be minimized to the maximum extent possible. care should be taken to ensure specific recommendations, such as CLIN and ACRN structures from DFAS, are taken into account to ensure closeout processes are not unduly hamstrung.

d. Personnel Skill Level

Each organization should ensure that personnel receive adequate training prior to assignment to contract closeout activities. The placement of new personnel without adequate training into payment, negotiation, or audit positions should be deferred until their skills have been raised to some acceptable level. Continued education and professional development of personnel should be continued. Not only should this include the technical skills required for the job, but this should also include skills associated with effective interpersonal communication, teaming, multi-tasking, and organizing.

e. Contract Financial Issues

There must be mechanisms and procedures put into place that enable participants to quickly ascertain the nature and status of funding on contracts nearing physical completion. Pressure needs to be put on the contractor to maximize proper utilization of contract funding well prior to expiration or cancellation. This will require better dataflow and communication between DFAS and DCMA.

f. Management Concern

Individual commands should be held responsible for key contract closeout metrics by higher commands. Management and those directly working with contract closeout should have at least part of their fitness report or performance appraisal address their productivity as it pertains to the contract closeout process. Other strategies could involve stressing the importance of contract closeout by including a review of the process as part of every post-award contract briefing. Lastly centralizing the contract closeout

function can emphasize its importance as well as allow better visibility and focus of effort on any problem.

g. Perceptions

Personnel should be recognized, rewarded, and incentivized to master the contract closeout process. Personnel should not be placed in contract closeout positions for overly extended periods of time. Top performers should be rotated through contract closeout positions. Such rotations should be developed as career enhancing assignments.

h. Timeliness

Contract closeout processes must be recognized at the start of a contract's life-cycle. Well prior to physical completion DCMA should start rigorously pursuing the steps that need to be accomplished. In some cases timeliness may require additional resources to apply to specific contract closeout problems such as DCAA audits.

i. Problematic Steps

Maximizing the use of fixed-price contracts can help reduce the dependence on the most problematic steps. Existing acquisition reforms and streamlining such as quick-closeout procedures can avoid these problematic steps, but at a cost to some other organization. Increasing the contractor's incentives such as past performance input, penalties, or larger with-hold amounts may help to alleviate some of these problems.

j. Existing Backlogs

Existing backlogs require specific application of focused resources. Success has been demonstrated by utilizing trained and motivated teams of personnel to attack backlogs, usually with participants form all of the involved organizations or functional areas. This may involve the use of in-house expertise, personnel from outside of the command or even contractor support.

k. Inadequate Manpower

Inadequate manpower can only be resolved with either overarching systems that streamline and automate the process or by the application of additional manpower. Often times it may not be the manpower, but the focus and dedication of the staff involved. In this case centralizing a closeout function can maximize the focus of relatively few people on the process vice having many people not focused on the process

at all which is prevalent in a decentralized structure. Additionally the use of contracted out closeout services has been successful in many documented cases.

l. Poor Records/Documentation

Enforcing standardization, organization, and the use of checklists can help alleviate some of the contract file problems. Additionally a system that annually reviews every contract folder to ensure all documents are present and all data is updated can ensure that files are well prepared for the contract closeout process.

5. Secondary Research Question 5

What actions might be taken to enhance the contract closeout process? Based on the research completed there are some basic recommendations that can be made to enhance the contract closeout process: (1) Take appropriate steps to make contract closeout a command priority throughout the Department of the Navy, (2) Develop specialized contract closeout training, (3) Take an immediate look at the four most problematic steps of the contract closeout process and implement immediate measures to alleviate the problems that have historically, and to this day, plague them, and (4) Centralize the contract closeout function in as many commands as practical.

6. Primary Research Question

What are the critical pathologies associated with the contract closeout process and what strategies might be employed to effectively attack these pathologies?

a. Process friction

Process friction can be minimized or overcome by decreasing the number of participants in the process, increasing the teaming between organizations, and by increasing the efficiency of communications. To decrease the number of participants personnel should be empowered to the greatest level possible. This may include the increased use of reforms such as quick-closeout procedures which may decrease the involvement of DCAA. This also may include delegation to the ACO of all necessary authorities to fully close a contract. Existing problem areas may need increased use of IPTs or specialized short-term Tiger teams to focus efforts at reducing specific problem areas. Lastly, communication between all organizations needs to be as efficient as possible. Points of contact to include updated telephone numbers, email, and mailing addresses need to be kept up to date. Action should be taken to ensure that all personnel

have access to all of the information systems necessary to aid them in the completion of their tasks.

b. Inadequate Information Technology

To the maximum extent possible, IT systems should be developed that ensure connectivity and access to all organizations involved in the contract closeout process. Mechanisms should be put into place to ensure that those systems that do not have direct connect capability have the ability to import/export data easily when needed. Additionally, IT systems need the ability to automatically track key milestones of the physically complete contract through the closeout process in order to automatically generate the necessary evaluation metrics. Lastly mechanisms must be put into place to ensure data integrity and accuracy.

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d. Personnel Skill Level

Each organization should ensure that personnel receive adequate training prior to assignment to contract closeout activities. The placement of new personnel without adequate training into payment, negotiation, or audit positions should be deferred until their skills have been raised to some acceptable level. Continued education and professional development of personnel should be continued. Not only should this include the technical skills required for the job, but this should also include skills associated with effective interpersonal communication, teaming, multi-tasking, and organizing.

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physical completion. Pressure needs to be put on the contractor to maximize proper utilization of contract funding well prior to expiration or cancellation. This will require better dataflow and communication between DFAS and DCMA.

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Existing backlogs require specific application of focused resources. Success has been demonstrated by utilizing trained and motivated teams of personnel to attack backlogs, usually with participants form all of the involved organizations or functional areas. This may involve the use of in-house expertise, personnel from outside of the command or even contractor support.

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Inadequate manpower can only be resolved with either overarching systems that streamline and automate the process or by the application of additional manpower. Often times it may not be the manpower, but the focus and dedication of the staff involved. In this case centralizing a closeout function can maximize the focus of relatively few people on the process vice having many people not focused on the process at all which is prevalent in a decentralized structure. Additionally the use of contracted out closeout services has been successful in many documented cases.

l. Poor Records/Documentation

Enforcing standardization, organization, and the use of checklists can help alleviate some of the contract file problems. Additionally a system that annually reviews every contract folder to ensure all documents are present and all data is updated can ensure that files are well prepared for the contract closeout process.

APPENDIX 1: CONTRACT CLOSEOUT SURVEY

CONTRACT CLOSEOUT SURVEY

SECTION 1: DEMOGRAPHICS

1. What is your organizational role in the contract closeout process?

DCMA: ☐ Contract Administrator ☐ ACO
☐ Industrial Engineer ☐ Production Specialist
☐ Property Mgt Specialist ☐ Other _____

CONTRACTOR: ☐ Journeyman Contract Administrator
☐ Supervisory/Senior Contract Administrator
☐ Other _____

DCAA: ☐ Supervisory Auditor ☐ Auditor
☐ Other _____

BUYING ACTIVITY: ☐ PCO ☐ Contract Specialist
☐ Finance ☐ Legal ☐ Security
☐ Program Management ☐ Other _____

DFAS: ☐ Accounting Tech ☐ Fin Sys Specialist
☐ Other _____

2. What is your level of experience working with the Federal Government Acquisitions process?

☐ < 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16+ years

3. How would you describe your level of expertise with the contract closeout process?

☐ None ☐ Very little ☐ Moderate ☐ Extensive

4. What is your level of experience working with/in the contract closeout process?

☐ < 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16+ years

5. What is the highest level of education that you have attained?

☐ High School ☐ Some College ☐ College Degree ☐ Graduate/Postgraduate Degree

6. If you are a Federal Government employee within what range do you fall?

☐ GS 1-7 ☐ GS 8-11 ☐ GS 12-13 ☐ GS 14-15 ☐ SES

7. If you are in the military within what range do you fall?

☐ E 1-5 ☐ E 6-9 ☐ WO ☐ O 1-3 ☐ O 4-6

8. At what level are you DAWIA Certified in your primary occupational field?

☐ N/A ☐ None ☐ Level I ☐ Level II ☐ Level III

SECTION 2: INPUTS

1	**Not important at all**
2	Somewhat unimportant
3	Neutral either way
4	Somewhat Important
5	Extremely Important

For each question below (9-11) circle the number to the right that best fits your opinion on the importance of the issue. Use the scale above to match your opinion.

Question	Scale				
9. Does your command communicate that contract closeout is an important function?	1	2	3	4	5
10. Do you believe that contract closeout is an important function?	1	2	3	4	5
11. Does your command behave in a manner that shows contract closeout is important?	1	2	3	4	5

12. Name the top three factors it takes to have a successful contract closeouts process?

_____

_____

_____

13. What are some economic factors that can impact the success of the contract closeout process? (e.g., dollar value of the contract, amount of canceling funds, and resources required)

_____

_____

_____

_____

14. Are there any social factors that can impact the success of the contract closeout process? (e.g., workload assignments, peer pressure, command visibility)

_____

_____

_____

_____

SECTION 3: THROUGHPUT

The procedures for contract closeout include the following 15 steps.

(1) Disposition of classified material is completed;
(2) Final patent report is cleared;
(3) Final royalty report is cleared;
(4) There is no outstanding value engineering change proposal;
(5) Plant clearance report is received;
(6) Property clearance is received;
(7) All interim or disallowed costs are settled;
(8) Price revision is completed;
(9) Subcontracts are settled by the prime contractor;
(10) Prior year indirect cost rates are settled;
(11) Termination docket is completed;
(12) Contract audit is completed;
(13) Contractor's closing statement is completed;
(14) Contractor's final invoice has been submitted; and
(15) Contract funds review is completed and deobligation of any excess funds is recommended.

15. Based on the 15 steps above, in your opinion, what are the three most difficult steps? Briefly describe the problem(s) that make the step difficult and describe things that can or could make the step less difficult.

STEP	PROBLEMS	SOLUTIONS

16. Based on the previously mentioned 15 steps, which three steps do you consider take the longest to complete and why?

STEP	WHY?

17. Based on your observations, do contract closeout activities have the appropriate resources? (e.g., manpower, storage facilities, Information Technology)

☐ Yes ☐ No (If no, what is lacking)

_____
_____
_____
_____

0	**Not Applicable**
1	**No**
2	Somewhat
3	Moderately
4	Frequently
5	Always

For each question below (18-26) circle the number to the right that best fits your opinion on the issue. Use the scale above to match your opinion.

Question	Scale					
18. Do personnel in the contract closeout process have the appropriate knowledge, skills, and abilities to complete their tasks?	0	1	2	3	4	5
19. Do you feel that the contract closeout process gets sufficient support from security personnel?	0	1	2	3	4	5
20. Do you feel that the contract closeout process gets sufficient support from legal personnel?	0	1	2	3	4	5
21. Do you feel that the contract closeout process gets sufficient support from finance personnel?	0	1	2	3	4	5
22. Do you feel that the contract closeout process gets sufficient support from contracts personnel?	0	1	2	3	4	5
23. Do you feel that the contract closeout process gets sufficient support from DCMA personnel?	0	1	2	3	4	5
24. Do you feel that the contract closeout process gets sufficient support from DCAA personnel?	0	1	2	3	4	5
25. Do you feel that the contract closeout process gets sufficient support from contractor personnel?	0	1	2	3	4	5
26. Do you feel that contract closeout has the proper level of management concern?	0	1	2	3	4	5

27. Do you believe that the contract closeout process would be better served as a centralized function or a decentralized function and why? (Centralized would have a separate branch that handles all of an organization's closeouts, whereas decentralized would have the PCO who awards the contract responsible for contract closeout)

☐ Centralized ☐ Decentralized

For each question below (28-30) enter numerical rankings from 1-5 that best fits your opinion on the issue as it pertains to the contract closeout process. Each question should result in all rankings (1,2,3,4,5) being used. Do not repeat ranking numbers within a single question.

Question	EMAIL	FAX	MEETING	PHONE	USMAIL
28. Rank the following forms of communication in order of problems encountered. (1 least problems, 5 most problems)					
29. Rank the following forms of communication in order of personal preference. (1 for least preferred, 5 for most preferred)					
30. Rank the following forms of communication in order of effectiveness. (1 for least effective, 5 for most effective)					

31. Have you seen evidence that any acquisition reforms or streamlining have been incorporated into the contract closeout process? If so, what where they?

☐ Yes ☐ No

32. How do you measure the productivity of the contract closeout process?

33. What are four effective metrics or measures that you think are important to the contract closeout process?

You may be done with the questionnaire now. Do not answer any further questions unless you have experience working in or with a CENTRALIZED contract closeout function or environment.

Questions 34- 40 only apply to those participants with experience in supporting the contract closeout process via a centralized closeout organization. A centralized organization would have a separate branch that handles all of an organization's contract closeout activities, whereas a decentralized organization would have the PCO who awards the contract responsible for contract closeout.

0	**Not Applicable**
1	**No**
2	Somewhat
3	Moderately
4	Frequently

For each question below (34-36) circle the number to the right that best fits your opinion on the issue. Use the scale above to match your opinion.

Question	Scale				
34. Do contracts that are physically complete arrive to closeout personnel in a timely manner?	0	1	2	3	4
35. Do you feel that contract closeout has the proper level of management concern by the overall Contracts Directorate staff?	0	1	2	3	4
36. Do you feel that contract closeout has the proper level of management concern by the overall organization's management staff?	0	1	2	3	4

0	**Not Applicable**
1	**Do Not Know**
2	Lower
3	Same
4	Higher
5	Always

For each question below (37-39) circle the number to the right that best fits your opinion on the issue. Use the scale above to match your opinion.

Question	Scale					
37. How do you rate the morale of contract closeout personnel when compared to those not working in contract closeout?	0	1	2	3	4	5
38. How do you rate the level of motivation of contract closeout personnel when compared to those not working in contract closeout?	0	1	2	3	4	5
39. How do you rate the level of knowledge, skills, and abilities of contract closeout personnel when compared to those not working in contract closeout?	0	1	2	3	4	5

40. What do you consider to be the most effective length of assignment to contract closeout?

☐ 0-6 Months ☐ 7-12 Months ☐ 13-18 Months ☐ 19-24 Months

☐ 24+ Months ☐ Permanent Assignment

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